North Carolina Pharmacist

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Community Care *of* North Carolina

Building regional integrated delivery systems that support the Medical Home

NCAP Practice Forum Meetings:

Quality CE & Networking Opportunities

Acute Care

Practice Forum Meeting

March 24-26, 2011
Winston-Salem, NC

Developed with UNC Eshelman School of Pharmacy
Co-Sponsored by Campbell University College of Pharmacy & Health Sciences and
Wingate University School of Pharmacy

Topics include:

- Pharmacy and the C-Suite: Managing the Interface
- Providing Sustained Hospital and Pharmacy Leadership in a Community
- (CI) Update in Treatments for Intra-Abdominal Infections
- (AI) Vision 2015: Where Are We Now?
- (RSI) Continuous Professional Development: How to Incorporate into Learning?
- (CI) MRSA Guideline Update
- (AI) Shortage Management – Now What?
- (RSI) Career Transitions
- (CI/AI/RSI) PPMI Overview: ASHP Staff
- (CI/AI/RSI) PPMI North Carolina Perspective
- (CI/AI) Key Papers 2010-2011
- (CI/AI) What Do We Do with Rosiglitazone?
- (RSI) Platform Presentations
- New Anticoagulants: How Do We Promote Safety in Clinical Practice
- Diversion and Law Review for Technicians
- New Drugs for Technicians

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- Medicaid Update
- POEMS That Should Change Your Consulting Practice
- New Drug Update 2011
- 5 Skills for Clinical Teaching
- MDS 3.0 for Consultant Pharmacists
- Literature Review
- Applying Fall Prevention Guidelines Across All Senior Care Settings
- Chronic Care Practice Forum Executive Committee Meeting
- Pharmacy Law Update for Pharmacists
- The Scoop on Poop: An Update on C difficile Infection
- Basics of Addiction Medicine
- Optimizing Bone Health in Cancer Patients
- Through The Eyes

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North Carolina Pharmacist

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Inside

Moving on

Reading a devotional message entitled "Going Home," the author said "No matter how well we have managed the property God has loaned to us, we must eventually move on to a new home." The same is true in our professional life. Eventually our career must end. Until that decision is made, we work hard to take care of patients and advance our organization and/or profession. For much of my career I have focused on shoring up and extending the foundation of pharmacy so that the next generation of pharmacists can advance the profession even further. I start my first message of 2011 to our members with this thought because my tenure at NCAP is coming to a close. I told the Executive Committee in December that I would leave as Executive Director in 2012. At the January Board of Directors meeting we discussed the timing of the search process and how to proceed. Although I am not ready to retire, I am ready to do something else professionally, including helping NCAP as they transition to a new Executive Director. We will keep you informed about the process. In June I will complete ten years of service to NCAP. That time has really flown by.

The beginning of a new year is a good time to reflect. Approaching my 72nd birthday perhaps makes reflection more important because I have little time left to do much more.

Over the Christmas holidays pharmacy lost Claude Paoloni. Claude interviewed me at the APhA meeting in Dallas in the spring of 1966. I was offered the position of Director of the Plan of Pharmacy Assistance (POPA), and I came to Chapel Hill that fall. How blessed I have been to be associated with North Carolina pharmacy for forty-five years. I will celebrate my 50th year in pharmacy this year and look forward to getting my 50-year pin at the NCAP Convention.

Arriving in North Carolina that fall I was introduced to North Carolina pharmacy by W.J. Smith, North Carolina Pharmaceutical Association's Executive Director, and H.C. McAllister, the Secretary of the North Carolina Board of Pharmacy. George Hager was the Dean at the UNC School of Pharmacy and offered space in the School of Pharmacy to house POPA, and I was granted an appointment as Instructor in the School. As I look back, I feel indebted to these four men who made a great impact on my professional life. I hope I have honored them by the way I have supported North Carolina pharmacy throughout my career.

But, life is full of new beginnings, and that is true for NCAP also. It is time to bring in new leadership because the world is changing technologically, and associations need to do things differently to stay relevant, meet members' needs and find new revenue streams. Let's work together to make the transition successful. I am leaving NCAP with a strong membership base, enough reserves to cover a year or more of operations, and an Endowment Fund with assets of almost two million dollars. I pledge to you that I will work hard to strengthen NCAP both financially and professionally until the transition is complete. I am energized as I look for my next opportunity to serve pharmacy in North Carolina.

This new year should bring new opportunities for NCAP and North Carolina Pharmacy. NCAP's primary legislative agenda is to expand the pharmacist immunization role. All facets of pharmacy support this effort, but NCAP will take the lead. Because of the North Carolina budget shortfall, our other legislative efforts will be focused on preserving reimbursement levels for pharmacists in Medicaid and the State Health Plan. Pharmacy Day in the Legislature will be held March 22, 2011. With so many newly elected legislators, your participation this year will be important. Please plan to join your pharmacy colleagues in Raleigh March on 22, 2011.

Fred M. Eckel
Executive Director

We Need *you* at Pharmacy Day in the Legislature, March 22, 2011

North Carolina Pharmacy needs your presence in Raleigh to make our Legislators aware of how pharmacists help the state save money on health care expenses. We have many new Legislators this year and for the first time in several years, we have a pharmacist serving in the House. Pharmacy Day begins with a Health Fair followed by an education session to help prepare you for your pre-scheduled meeting with your Representative and Senator. Help us tell pharmacy's story to our Legislators.

10:00 a.m. to 2:00 p.m.	Health Fair in Quad 1300 of the Legislative Building
2:00 p.m. to 4:15 p.m.	Educational Session, Auditorium, Museum of History
4:15 p.m. to 5:30 p.m.	Time to meet with your Legislators
5:30 p.m. to 7:00 p.m.	Reception, Lobby, Museum of History

More information can be found at www.ncpharmacists.org or call NCAP at 919-967-2237.

North Carolina Association of Pharmacists
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Dear Members,

Involvement. Professionals are motivated to join organizations for a myriad of reasons. When you are involved in any group, you need to ask, "are you here to be served by the group or to serve the group?" President Kennedy expressed this thought best with his "Ask not what your country can do for you; ask what you can do for your country." As a member of NCAP you should be asking the parallel question, "what can I do to give back to my profession?" I remember, from my first day in pharmacy school, being encouraged by Dean Maddox to join professional organizations and be involved. I continue in the belief that every pharmacist owes a time commitment to their profession to protect and nurture it for future pharmacists.

Unfortunately, people become lost in any organization. With a group as large and diverse as NCAP it is easy to pay your membership dues and then forget it for another year. You may feel that your area of pharmacy is not being addressed. You may have some old grudge that you continue to nurture. You may feel that your talents are not being tapped, that there is an "in" group that controls the organization, and you're unappreciated. Professionals should not approach an organization in this way. NCAP exists to "unite, serve and advance" the profession of pharmacy in North Carolina. NCAP is an association of Professionals, us, the pharmacists of North Carolina. Our goal is to unite our profession, to serve our profession, to advance our profession. Together. You are integral to the organization. If you are waiting to be asked, you have missed the point. NCAP needs you to be involved. Make your voice heard, show up at educational meetings and attend Board meetings. The three-year strategic plan is published on our website and is currently being accomplished by the membership. The plan is there to encourage your involvement.

If you are an immunizing pharmacist, you can thank NCAP. If you were one of the 2000 pharmacists, technicians and residents who received Continuing Education through an NCAP program, you can thank NCAP. If you benefited from technician training, you can thank NCAP. By thanking NCAP you are thanking the staff and all the involved volunteer pharmacy professionals who have donated their time and energy to unite, serve and advance pharmacy in North Carolina in the past year. In this new year you can add yourself to the list of pharmacists deserving thanks by finding a place to help and be involved. You can get started with the new year and your involvement with NCAP by attending the Board meetings. This year our NCAP board meetings will be January 27, April 26, July 21, and November 15. Board meetings are open to all members and start at 10am. Unless otherwise announced, they are held at the Institute of Pharmacy, 109 Church Street, Chapel Hill. I would also encourage you to visit the website, determine which committee you would be interested in and become involved. Many of our committees are large, but they are active and are a great place to get involved. Another way to be involved is Pharmacy Day in the Legislature which will be March 22. Details will be available on the website. I encourage you to join your colleagues on this day to make our voice heard in the Legislature.

Finally, talk with your friends who are pharmacists. We had a great peer to peer recruitment effort in 2010 that resulted in 257 new members for NCAP. I encourage each of you to continue this trend in the new year. You know pharmacists who are not members of NCAP. You are our best resource for reaching those pharmacists and encouraging them to join our efforts. Due to our active membership I have great enthusiasm for our future as an organization and profession.

Please join me this year in making NCAP an active peer group that challenges each other as we advance our common cause of pharmaceutical excellence in North Carolina. NCAP is not complete unless you are involved.

Best wishes for the new year!
Cecil Davis
President

Advancing Pharmacy. Improving Health.

Community Care of North Carolina

Building regional integrated delivery systems that support the Medical Home

The Pharmacist as a Medical Home Co-Enzyme

By Troy Trygstad PharmD, MBA, PhD
Director of the Network Pharmacist Program, Community Care of North Carolina

Community Care of North Carolina (CCNC) is the shared services umbrella organization for 14 constituent CCNC Networks, each having its own member physician practices. CCNC's networks currently contract with over 1,300 practices to create a hybrid fee-for-service and per member per month (PMPM) model of reimbursement in exchange for provider participation in building Patient-Centered Medical Homes (PCMH). The net result is a balance in resource allocation between the clear and present need for traditional encounter-based care delivery and the strong desire of payors and patients alike for longitudinally-oriented, population-based care delivery focused on chronic conditions that are ultimately responsible for up to three-quarters of the total health care dollar. PMPM funding is shared between the regional Networks that provide wraparound support for its member practices and the practices themselves with the goal of creating a community-based integrated care delivery model.

Much has been made of PCMH within health policy circles of late, garnering high praise, promise and skepticism during the Health Reform discussion of 2009. And much like Medication Therapy Management, it has been subjected to many meanings by many stakeholders. At its core though, it is meant to convey the notion and need for a "general contractor" to coordinate one's healthcare, a need highlighted in stark relief by an excerpt from testimony given to Congress in 2007:

> *"Medicare beneficiaries with multiple chronic illnesses see an average of 13 different physicians, fill 50 different prescriptions per year, account for 76 percent of all hospital admissions, and are 100 times more likely to have a preventable hospitalization than those with no chronic conditions."* [1]

Medical Home's roots run deep in North Carolina, a state that has had a strong tradition of supporting, cultivating and advancing primary care, both in education and in practice. Excerpts from a 2004 review in the AAP's journal Pediatrics[2] reveals a remarkable level of forward thinking from the PCMH community over a quarter of a century ago:

American Academy of Pediatrics (1967)[3]

Standards of Child Health Care written by the AAP Council on Pediatric Practice by the AAP in 1967 emphasizes the importance of centralized medical records for children with chronic diseases or disabling conditions, stating that a, "lack of a complete record and a 'medical home' is a major deterrent to adequate health supervision."

North Carolina "Health Home" (1978)

"(The Health Home should provide) ....1) commitment to the individual, 2) primary services, 3) full-time accessibility, 4) service continuity, 5) comprehensive record-keeping, 6) competent medical management, and 7) cost-effective care."

In this century, PCMH has been further refined to reflect the economic reality of providing this level care and the need for an inter-professional team, led by physicians:

Joint Principles of the Patient-Centered Medical Home[4] **(February 2007)**
American Academy of Family Physicians (AAFP)
American Academy of Pediatrics (AAP)
American College of Physicians (ACP)
American Osteopathic Association (AOA)

- Personal physician
- Physician directed medical practice
- Whole person orientation
- Care is coordinated/integrated across all elements of system
- Quality and safety
- Enhanced access
- Payment (among other highlighted sub-bullets)
  - Payment appropriately recognizes the

added value
- Reflects the value of physician and non-physician staff patient-centered care management
- Should pay for services associated with coordination of care

Upon review of these principles and colored by my own eight year experience with CCNC, I see a striking similarity between primary care's efforts to evolve towards the PCMH model and the Pharmaceutical Care movement within our own profession. Both efforts have great promise to transform the current system of care and align with each other well, but are similarly challenged by "the status quo" and the "tyranny of now."

Yet "business as usual" is no longer an option. Focusing again on Medicare, consider that nearly one in five hospitalized Medicare beneficiaries will be re-hospitalized within 30 days, and greater than one in three within 90 days.[5] Additionally, one-half of those re-hospitalized within 30 days never had an outpatient visit for follow-up prior to the re-hospitalization.[4] Historically, Medicare has been a reliable barometer and harbinger of what is to come. It is entirely rational to conclude that as goes Medicare over the next two decades, so goes the entire health care system, leading to the most important statistic of them all:

Medicare has $34 trillion dollars in unfunded future obligations as of 2008.

Stated another way, Medicare needs to find either 1) 34 trillion in new tax revenue or 2) 34 trillion in cost-savings; with the latter coming ultimately from one of three sources; lower payments to providers, reduced benefits, or savings related to healthier recipients needing less services. Focusing on the latter, a more effective and efficient care delivery seems to be the only universally palatable choice and is thus the focus of much effort in modern health care reform. As a result, we will likely see much greater emphasis on "value" in the near future, a metric that balances both cost and benefits of a service, procedure or program. And though there are varying degrees of confidence that a quality-driven concept such as PCMH can provide the type of cost savings to fill the budget gap, there is growing evidence that it can have quite a positive effect on quality of care and patient outcomes, while simultaneously reducing costs.[7]

Coming full circle, CCNC and its efforts to facilitate multi-professional, multi-setting PCMH activities are meant to generate both cost and quality gains. There is great opportunity within the CCNC and the larger PCMH movement for pharmacists to play an active role as Medical Home "co-enzymes," greatly augmenting and enhancing the efficiency and effectiveness of the physician-led PCMH team.

The topics chosen for this issue of *North Carolina Pharmacist* are meant to illustrate the diversity of activity and opportunity to engage PCMH as a "co-enzyme," partnering with and working hand-in-hand with other Medical Home Extenders such as physicians' assistants, nurses, social workers and others with the goal of achieving "well care" at the expense of "sick care."

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The CCNC Clinical Pharmacist Partner Program: Early Experiences and Lessons Learned

By Tamika Robinson, PharmD, CCNC Network Pharmacist, Southern Piedmont Community Care Plan

Co-authored by Katina J. Rice, PharmD, Network Clinical Pharmacist, Partnership For Health Management

Community Care of North Carolina (CCNC), a Medicaid care management program, builds community health networks organized and operated by community physicians, hospitals, health departments, and departments of social services.

CCNC is comprised of 14 local networks with more than 3,000 physicians working with other community providers to better manage the 800,000 Medicaid and North Carolina Health Choice enrollees. These regional networks are established in an effort to achieve long-term quality, cost, access and utilization objectives in the management of care for Medicaid recipients.

Community Care of North Carolina implemented new pharmacy initiatives in 2007 to improve the management of patients taking multiple medications. This included the addition of at least one pharmacist to each local network. The primary responsibilities of the pharmacists included, but were not limited to: education, coordination, roll-out, and oversight of all the pharmacy benefits programs within the network.

In the spring of 2010, clinical pharmacists were added to provide extensive medication management services through collaborating in a multi-disciplinary approach to patient care.

Southern Piedmont Community Care Plan

Southern Piedmont Community Care Plan (SPCCP), A Beacon Community, was designed in collaboration with healthcare partners and community services to provide increased access to healthcare services for 45,000 Medicaid recipients in Cabarrus, Rowan, and Stanly counties.

SPCCP staffs a full-time network and clinical pharmacist, and has collaborated with our Network Health System Partners to contract their pharmacists. These pharmacists manage a highly complex patient population and focus on supporting our goals and measures to improve healthcare outcomes. The pharmacy-related activities include reviewing medication reconciliations completed by care managers and performing comprehensive reviews with a

goal of reducing preventable hospital readmissions and ED visits. Information is then communicated with the patient's PCP in an effort to improve the quality of care by providing cost-conscious, evidence-based recommendations.

To date, SPCCP has four contracted pharmacists dispersed throughout the three counties. The pharmacists' salaries are reimbursed based upon medication management services, which include patient education regarding safe and rational use of drugs, drug-drug interaction monitoring, cost efficacy management, and therapeutic optimization, just to name a few. This model was selected due to the pharmacists having established relationships with the providers in an effort to provide a sustainable patient management system.

Early Experiences and Lessons Learned:

- Contracting with pharmacists already established in clinics allows for a collaborative approach to patient management, since the pharmacist-provider relationship is already established.
- The ability to have access to the patient's record to make a more informed decision regarding patient care via EMR systems.
- The convenience of being on-sight and available for medication consults.
- Helping to facilitate the goals and measures set forth by Community Care of North Carolina.
- The autonomy of being able to tailor medication management services to fit each individual clinic that is unique with its own identity.
- Having multiple pharmacists allow for constant flow of innovative and creative strategies to improve overall quality of care.

Partnership for Health Management (P4)

Partnership for Health Management (P4) is the local CCNC Network for Guilford, Rockingham, and Randolph counties. P4 has an enrollment of about 63,000 patients and 43 medical practices. In July of 2007, P4 added one full-time Network Pharmacist who performed a variety of administrative and clinical tasks. As the clinical needs of the network increased, a part-time (15 hour per week) clinical pharmacist was added. Currently, the Network Pharmacist spends about 40% of her time completing clinical tasks and the part-time clinical pharmacist spends about 95% of her time completing clinical tasks.

The Network Pharmacist is an employee of the network and is based within the P4 "network office." The part-time clinical pharmacist is contracted from the local AHEC (Area Health Education Center) and completes her network tasks at the AHEC office. Communication with the part-time clinical pharmacist by network staff and care managers is usually done virtually. She has EMR (electronic medical record) access at the largest Medical Center and its associated practices within the network as well as access to the software that network care managers use.

The main focus of the clinical pharmacist's activities is medication management. Medication management includes reviewing medication reconciliations completed by the Transitional Care Nurses who see hospitalized patients, and completing in-depth medication reviews. Any clinically pertinent findings from medication management are communicated with the provider most commonly by fax or by telephone on all urgent matters.

The addition of the part-time clinical pharmacist has proven to be a positive experience for P4. Prior to adding the additional clinical staff, the Network Pharmacist was responsible for both clinical and administrative activities. With the change in the economy, the pharmacy administrative duties increased. Having another pharmacist to attend to medication management helped things run smoothly.

Early experiences and lessons learned:

- Virtual access to medical records is vital.
- The new clinical staff should attend the medical management meetings to meet the key network players (at least when they are first hired).
- The clinical pharmacist should be knowledgeable about some of the administrative pharmacy initiatives just in case they have to step in for the Network Pharmacist or if they are asked a question by a physician.
- The Network Pharmacist should be the "manager" of the pharmacy services for his/her network and have the clinical staff report to him/her.

Healthcare is constantly changing, thus forcing many states to clamp down on costs. To date, Medications are the highest expenditure for NC Medicaid and represent an important role in reducing preventable readmissions and ED visits. A multidisciplinary approach to health management that involves various disciplines across the healthcare continuum optimizes the quality of patient care. Having clinical and administrative pharmacists on staff is like having the best of both worlds. Allowing the administrative pharmacist to "manage" the pharmaceutical care taking place in their network yields a more streamlined approach to setting policies and circulating information. As the benefits of the pharmacist-physician relationships become more apparent, there will likely be an increase in this type of healthcare management model.

The Pharmacist-Care Manager Team: One Plus One Equals Three

By Trista Pfeiffenberger, PharmD, MS, Network Pharmacist, AccessCare

Co-athored by
Megan Rose, PharmD, Network Pharmacist, Access III of the Lower Cape Fear
and
Marcelletta Miles, RN, BSN, MBA, Vice President of Clinical Operations and Affairs, AccessCare

There are symbiotic advantages to having a team of individuals with varied skill sets and backgrounds working in a well-organized way to improve health outcomes related to medication taking. CCNC has employed this ideal in creating a medication reconciliation and review process to do just that. Our goal was to design a medication management program infrastructure that complements the roles and locations of nurse care managers and pharmacists. Each CCNC network includes clinical staff consisting of nurse care managers, social work care managers, a medical director, and pharmacists. They collaborate with primary care providers (PCPs) affiliated with the network as part of a patient-centered medical home.

Medication management activities are

performed by nurse care managers and pharmacists for both transitional care and chronic care patients. Transitional care medication management focuses namely on the identification of discrepancies through medication reconciliation after discharge from an acute care facility. Patients are identified or referred for chronic care medication management by: 1) their care manager, 2) their primary care provider, or 3) a pharmacist directly embedded in the PCP's practice. Regardless of the setting, the high volume of patients who require review of medication therapy makes the partnership of nurse care managers and pharmacists a key component to effectively managing as much of the population as possible.

Nurse care managers have an established relationship with the patient that provides an optimal opportunity to gather the patient-reported list of medications. Nurse care managers use pharmacy claims data or pharmacy fill history reports as a resource when they visit the patient's home or do a telephonic interview about the patient's current medication therapy. They compare the list of medications that the patient reports taking against other available medication lists, identifying discrepancies that either need to urgently be reported to the PCP or relayed to the pharmacist as part of a comprehensive medication review.

The pharmacist uses clinical information (including medication lists) obtained from the nurse care manager, primary care provider, and hospital history and physical or discharge summary to conduct a comprehensive medication review and perform medication reconciliation. For example, a comprehensive medication review includes activities such as evaluating efficacy of therapy, scanning for drug-drug or drug-disease interactions, evaluating potential adverse drug reactions, reviewing the patient's medication regimen against existing practice guidelines and medical literature, and looking for opportunities to maximize cost-effective therapies and use of generic medications. Except for settings where the pharmacist is embedded directly within a physician practice or a hospital, patient interaction is mostly limited to telephonic communication in order to clarify or obtain more information about medication discrepancies or deliver patient education related to specific medications.

Because the nurse care managers are greater in number and spread out geographically across the network, they often have the best relationships with provider practices and thus are the primary means of communicating pharmacist recommendations to the primary care provider. They may also conduct relevant follow up with provider practices if a response to the pharmacist's recommendations is not received. The established relationship that nurse care managers have with practices allows them to best understand each practice's preferred means of communication.

The role that each member of the team plays may vary slightly within each network. Some medication management encounters are conducted solely by the nurse care manager or the pharmacist. A pharmacist comprehensive medication review is reserved for those patients who are relatively more complex, so some medication management activities (such as medication reconciliation) may be completed in entirety by the nurse care manager. Alternatively, there are some settings where a pharmacist is embedded within a provider practice, and medication reviews are conducted in conjunction with practice visits for patients who are not receiving case management.

In order for this type of medication management program to function well, there are several key components to the program's infrastructure that should be mentioned. First, all staff have received training about the process and, in some networks, have also completed competency exams. Second, each network has created specific tools to aid in gathering the medication lists and conducting reconciliation. Third, templates have been established for both nurse care managers and pharmacists to communicate relevant medication management findings back to the provider. It is critical to note that the tools, roles, and responsibilities mentioned have been designed around the scope of practice and training level of the staff.

In short, there are so many patients who could benefit from medication management services that both nurses and pharmacists need to function at the top of their license and do the things best suited to their education and training. It is quite advantageous to have diverse skill sets tackling complex medication regimens and the challenging drug therapy problems that come along with them.

From Soup to Nuts: The CCNC Model of Transitional Care

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As pharmacists, we are all aware of the many medication "issues" patients may experience in the community; everything from suboptimal adherence, side effects, interactions with other medications, OTC, or herbal supplements, cost barriers, etc. When patients move from one care setting to another, the chance for medication "issues" greatly increases.

Patient transitions across settings of care are a major cause of medication errors and Adverse Drug Events (ADEs). An important component of these transitions is the accurate and complete transfer of a patient's medication information.[1]

Transitional care has been defined as a set of actions designed to ensure the coordination and continuity of health care as patients transfer between different locations and different levels of care.[2] In 2009, CCNC implemented a model to assist with such transitions by embedding a transitional care pharmacist (TCP) into acute care settings. Although the care setting (large teaching hospital vs. small community hospital) and daily functions of the individual pharmacists vary, the role of the TCP is consistent throughout CCNC. The TCP serves as a "bridge" for the patient's medication regimen when transitioning from home to an inpatient setting and back to home. This "bridge" is customized for each patient and is built

on interdisciplinary relationships with both community and inpatient health care professionals. This medication "bridging" ideally leads to improved continuity of care and improved patient outcomes.

The best way to demonstrate the role of the CCNC TCP is to follow an actual CCNC patient case to demonstrate the continuity of care from admission, through inpatient stay, at discharge, to home and back to the primary care provider (PCP):

JD is a 43-year-old AAM admitted on 9/8/10 for substernal chest pain. His past medical history was significant for dyslipidemia, HTN, 'borderline' DM, questionable MI w/normal cath in 2003, depression, hypogonadism, and mild renal insufficiency (stable). He has no known drug allergies. His home medication list upon admission included the following:

1. Androgel 1% pump UD (last filled 7/2/10-*all last fill dates were obtained through Medicaid claims data updated through 8/21/10*)
2. Amlodipine 5mg 1 po daily (last filled 8/2/10)
3. Meformin 500mg 1 po daily (last filled 4/24/10)
4. Lisinopril 30mg 1 po daily (last filled 8/2/10)
5. Niaspan ER 750mg 1 po daily (last refills 7/2, 4/7, 2/6/10)
6. Crestor 10mg 1 po daily (last filled 4/7/10)

The TCP, reviewed JD's refill history, and conducted an inpatient interview, identifying several drug-related problems:

- JD was not taking his metformin due to GI side effects.
- JD was not taking his Niaspan ER as often as prescribed due to flushing.
- JD was not taking his Crestor due to muscle pains and weakness.

In an effort to resolve the medication related problems, the TCP provided the patient, hospitalist, and nursing staff with the following recommendations:

- JD was educated to take metformin after a meal to reduce GI side effects and was instructed to follow-up with his PCP if the side effects persisted.
- JD was educated on proper timing of his Niaspan and premedication with aspirin to reduce flushing. He was also provided with a low literacy Meducation® handout with pictograms to supplement the verbal education.
- JD was congratulated on his compliance with amlodipine and lisinopril.
- The hospitalist was contacted, by the TCP, and agreed to change Crestor to pravastatin 40mg daily in an effort to decrease JD's muscle aches and reduce the cost of therapy.
- The TCP requested JD's inpatient floor nurse reinforce medication education at discharge.

JD was discharged home on 9/10/10 after ruling-out for acute MI.

Soon after discharge, the TCP pharmacist and a CCNC RN Care Manager met with JD and his wife in his home to reconcile his home medications with the hospital discharge summary. The following issues were discovered during this process:

- JD was taking a number of OTC supplements, not previously identified in his medication lists, including fish oil, Green Tea Fat Burner and Whey Protein Anabolic Steroid.
- The most recent serum creatinine values obtained by the TCP from the PCPs office were 1.6 and 1.7mg/dl. He was still taking metformin.

In light of these new findings discovered after discharge, the following discussions took place between the TCP, PCP, the patient, and the care manager:

- The TCP cautioned JD regarding the creatine component from the Whey Protein supplement, noting that renal insufficiency was listed in the PMH.
- The TCP cautioned JD about multiple ingredients in the green tea product that may cause chest pain, tachycardia, palpitations, and increased blood pressure.
- The TCP and care manager informed the PCP of pertinent information from the hospital and home visits.
- The TCP alerted the PCP to JD's use of metformin and his recent creatinine values, as metformin use is contraindicated with SCr ≥ 1.5 in men. The PCP reported that he would have his office staff contact the patient to discontinue metformin and would reevaluate JD's blood sugars.
- The TCP informed the PCP of the use of the Whey Protein supplement and the green tea product; the PCP reported that he would reiterate the need to discontinue use of both, during the upcoming PCP office visit.

Due to the efforts of the TCP and other members of the healthcare team working together during the hospital to home "hand-off," it may be possible to prevent future admissions for cardiac complaints, assuming that JD's were secondary to OTC stimulant use. If he experiences fewer side effects from niacin and pravastatin, JD may have improved medication adherence and will be more likely to reach targeted cholesterol goals. Coaching JD regarding blood pressure control, reinforcing compliance with an ACE inhibitor, and limiting the use of OTC products with creatine may slow the progression of his chronic kidney disease. Discontinuation of metformin and close monitoring of JD's blood sugars may prevent complications of diabetes and adverse drug events such as metabolic acidosis.

This case demonstrates the level of complexity in truly 'bridging' a patient's medication use from home to an inpatient setting and back home again. Although CCNC transitional care pharmacists are primarily based in acute care settings, the TCP functions are actually community activities that coordinate patient care from admission to home and to the first outpatient visit. Transitional care pharmacist models will vary among care settings and geographical regions, as they should be developed to optimally meet the medication management needs of a particular community and the patient population it serves and should incorporate the use of existing resources in the area. The TCP model is not intended to replace a hospital's existing medication reconciliation process, but functions to enhance its current system and carry the process forward into the community.

From a recent article in *JAMA*, Darren DeWalt, MD referred to the hand-off of responsibility from the health care system to the patient as similar to the dismount in gymnastics. "Relatively few resources are spent on the transfer of care to the patient. . . all that work is meaningless without the dismount which . . . requires enabling the patient to understand and act in ways that maximize health outcomes. . . the most elegant and efficient medical therapies will fail if patients or caregivers cannot adequately and accurately administer the therapy. . . "[3] Expanding DeWalt's analogy by considering all transitions in care as a "dismount" then it is apparent that more focus should be placed on these transitions. The CCNC transitional care pharmacist model is striving to build better medication "bridges" and improve medication "dismounts" to improve continuity of care for our patients.

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Making Sure Patients Don't Fall Through the Healthcare Cracks

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Recognizing that patients often fall through the cracks of unfortunate silos in our healthcare system, our network of practice and hospital-embedded care managers and pharmacists frequently act as the bridge of coordination and communication between patients and health care providers. Perhaps this is best epitomized by the challenge of ensuring safe and appropriate medication use by patients. Medication errors occur 46% of the time during transitions: admission, transfer or discharge from a hospital.[1] Because these errors happen at multiple transition points, a multi-step medication reconciliation process is necessary to ensure all discrepancies are addressed. The following examples illustrate how this type of reconciliation process is beneficial for coordinated patient care.

Recently a patient was admitted for a heart failure exacerbation. Upon admission she diuresed almost two liters of fluid with administration of furosemide 100mg. Prescription claims revealed that furosemide had been filled over three months prior for only a thirty-day supply. When I visited her in the hospital the morning after admission, she reported feeling better and breathing much easier. When asked about furosemide, she conveyed that since no refills remained she thought her prescription was complete and she no longer required furosemide. Education on heart failure, including the importance of a maintenance diuretic regimen, was provided as well as follow-up with her primary care provider to ensure her discharge diuretic regimen was updated in her chart and prescriptions were available.

In reviewing another patient's list of fifteen monthly maintenance medications following a hospitalization for chest pain, I noticed that his hypertensive med regimen had changed three times in a three week span, first from his hospitalization and then through follow-up with his nephrologist and cardiologist, both unaware of the other specialist's recommendation. His primary care provider requested that I reconcile his medications, which resulted in a week-long investigation of his medication "story" and multiple phone calls to his specialists for coordination and agreement on his current regimen. Finally, in perhaps the most important step, I sat down with the patient at his follow-up primary care appointment to discuss with him the confusion, his included, surrounding his regimen and provide education. And afterwards, not withstanding a small feeling of victory, I reported back to his primary care physician that all meds had been reconciled and updated in the EMR.

Whether the medication story is a five or five thousand piece puzzle, patient information and specialist involvement must be connected to result in optimal patient outcomes. One patient may receive instruction from multiple health care providers. This, compounded with the patient's own lack of understanding regarding their med regimen, increases the risk for discrepancies and other adverse events.

Within our own community this year, our network was able to collaborate with a local Federally Qualified Health Center (FQHC) to provide care management and nursing support while addressing our goals of better coordinated care and reduced hospital readmission rates. Our own nurse care managers staff a post-hospital discharge clinic within the FQHC to address medication reconciliation and follow-up needs within two weeks of discharge and often much sooner. This ensures linkage with a primary care provider as well as identification of any needs, such as home health or lab monitoring, that have not been addressed, which could increase the risk of hospital readmission. In addition, same-day physician appointments are available if acute needs are identified. Many patients referred to this clinic were not linked with a primary care physician prior to hospitalization so this collaboration among the clinic, hospital, and our agency has created a seamless transition for patients who might have an even higher risk of falling through the cracks while attempting to navigate the health care system on their own.

The following case is a great example of this collaboration. A 56-year-old gentleman was admitted in August with jaw pain and shortness of breath. Past medical history included severe CAD with prior MI and stenting as well as cardiomyopathy, DM, HTN, hyperlipidemia, and depression. Repeat catheterization was completed with continued medical therapy recommended and thus several maintenance meds were altered and one new med added. Since our agency had no previous interaction with this patient, the embedded nurse care manager visited him while hospitalized to introduce our transitional care program. She requested the hospital discharge planner make a follow-up appointment for him with our post-discharge follow-up clinic so that date and time of appointment were included in his discharge instructions. During that clinic visit within a week of discharge, several med discrepancies were addressed and corrected that day, including Lisinopril dosing, which might have been problematic because his first primary care appointment was six weeks later. In addition, the patient voiced increased depressive symptoms and was referred to the behavioral health triage that day as well. His discharge plan had included follow-up with cardiology; however no appointment had been made and he did not understand to call the cardiology office for appointment, so our nurse called to have that appointment scheduled for him. Four months later, the patient is keeping all appointments with primary care, cardiology, and behavioral health, taking his maintenance medications, and has had no further hospitalizations.

Community Care of North Carolina's infrastructure of medical homes and "boots on the ground" care managers bridge patients through a complicated system of health care. Left to navigate this system on their own, patients are at increased risk of medical errors, including medication discrepancies. As our vision "healthy individuals, healthy communities" states, we hope this approach will

improve outcomes for our patients as well as contribute to a better system overall.

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Riding the Circuit in Rural North Carolina: The Pharmacist Perspective

By Neil Williams, PharmD, CPP
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Vice President Clinical Services, Medication Management, LLC

In 2007 I was working as a clinical pharmacist in a large metropolitan, multi-specialty medical practice. There were 11 physicians in the practice. Internal medicine, cardiology, endocrinology and rheumatology were some of the specialties within that practice. Our clinical pharmacy practice was in place for eight years at that time. We had a rich referral base and felt we established a sound reputation over the eight years. During our time there we were able to cultivate a strong relationship with the providers. There was a high level of trust by the providers in our decision making concerning drug therapy management. The result was a daily patient load of 20-30 patients for chronic disease management.

In the summer of 2007 Troy Trysgstad, Pharmacy Projects Director with Community Care of North Carolina, approached us with an idea for a practice-based clinical pharmacy services project in a rural area in mid-western North Carolina. We collaborated with Community Care of North Carolina (CCNC) on a project a few years earlier and therefore knew the organization well. CCNC also knew of our practice model and clinical experience and therefore thought we would be a good partner in this new project.

During the summer of 2007, prior to this project, CCNC was at work on creating a database of Medicaid prescription drug claims data. The database provided the user with fill dates for drug claims filed with Medicaid. This allowed the user to determine if prescriptions were filled in a timely manner and therefore assess potential adherence problems. It also allowed the user to make an *assumption* as to diagnoses based on the medications being used. This "Pharmacy Home" was very beneficial for pharmacists and care managers who were trying to improve the health of Medicaid recipients by addressing potential drug interactions, declining health from adherence issues, poly-pharmacy issues and drug cost issues just to name a few. The one element pharmacists often find missing when evaluating drug therapy is the patient chart. The progress notes, lab data, medical history and other information found in the chart is needed along with drug fill history to round out the drug use picture for any given patient. Gaining access to the claims data and putting a clinical pharmacist in the practice seemed to be an ideal mix. It was with this thought in mind that CCNC began approaching practices to gauge interest in a pilot program that would bring all of this together.

Three practices in the area expressed an interest in the project. One was the area Health Department. Two practices were small, rural primary care practices. One practice had two doctors. The other practice had one doctor, a nurse practitioner and a physician's assistant. Based on the practice size it was obvious that none of the practices had the volume to support a full-time pharmacist alone. My mind was drawn to old western movies (I am old enough to remember them) where a preacher or judge would ride a circuit in the frontier territories since there were no towns with populations large enough to support them full time. I began to picture myself on horseback going from practice to practice spreading the gospel of clinical pharmacy services and dispensing medication therapy justice! After proper plans and introductions, I embarked on the project in November 2007.

I felt there were two key ingredients for success in this endeavor: 1) helping the providers understand how I can help support them and their patients and 2) establishing trust. It is naïve to think that once a program like this begins the providers will hail your arrival and immediately begin to refer complex drug therapy problems to you and readily solicit and accept your advice. It takes time to accomplish the two tasks above. It is difficult, at best, when you are in the practice on a daily basis. The difficulty increases exponentially when you are in the practice for only half a day, one day a week.

After initial meetings and introductions with each practice we established the scheduled time for my visit each week. The overriding factor influencing the schedule was when there would be office space. Each practice had one day a week when a staff member was off work. This freed up office space for me. I would spend four hours at each practice site one day a week.

Given the fact that I would be in each office practice for only four hours one day a week, how could I provide any service of value? The Medicaid claims database seemed a good place to start.

My day began by accessing the Medicaid database for patients at a given practice and identifying those on eight or more medications, those with diabetes and those with congestive heart failure. Once I found a patient who met the criteria I reviewed their drug regimen and medical chart to look for opportunities to impact the patient's health. Discussing my findings and ideas face-to-face with the provider presented opportunities for feedback and a clearer understanding of the patient's particular needs, as well as the needs of the provider. I found that a written note to the provider was a poor substitute for direct discussion.

Another useful source of information to help direct or focus attention is a registry. If the office has a registry, or practice management software that can identify certain patient parameters, then the information obtained can help direct attention to those patients who may have the most urgent need for attention. In the absence of a database or registry, another option is to review the provider's upcoming schedule. I could look at the schedule that coincides with my next visit and preview the patient chart to see if there was an opportunity to contribute to his/her care.

There were ample opportunities to demonstrate how our services could be of benefit to the patients and the providers. One such example was the patient with COPD who was awaiting a lung transplant. A review of his chart indicated he was in the local emergency department monthly. The doctor prescribed the appropriate medications and maximized the doses to no avail. Interestingly, the Medicaid claims data showed that at least one of the medicines was not filled within the past six months. There were adherence issues with others. I brought this to the doctor's attention. The doctor addressed these findings with the patient at the next

office visit. The patient filled his prescriptions and began to take his medicine as directed. He did not have another ED visit for over six months! It did not take very many of these experiences before the doctors began to refer complex patients to me for ideas and suggestions.

I wish I could say that the rich relationship we now enjoy occurred over a two week period and that any pharmacist wishing to be involved in a similar setting could expect the same. The truth is that it took much longer. Each month the relationship progressed and deepened at all of the practices but there is really no substitute for time and successful interventions. It took almost three months before I began to receive the first unsolicited referrals. But remember, I was there only four hours a week.

Our practice has expanded as the doctors have asked for our involvement in other areas. For example, we now do medication reconciliation on all patients discharged from a local hospital and prepare an evaluation for the doctor. This medication evaluation is a key component of the patient's follow-up visit at the office. This is something we did not envision initially but it points to the importance of listening to the providers and meeting their needs.

The project continues three years later. We expanded our allotted time in one practice. Jenny McGuire, PharmD joined our team and has taken over my responsibilities at these practices. The transition has been smooth but there is no shortcut to building relationships and trust. It takes time. The time-line was shortened somewhat due to the fact that there was a foundation on which to build. Jenny has been able to further expand the program since joining and continues to do a remarkable job there.

CCNC is expanding this project and I am now working with other pharmacists and providers to establish similar programs in other areas of North Carolina. I think our experience with this project demonstrated that clinical pharmacy services coupled with medication use data are perceived as valuable by providers. Such services enable the provider to be more efficient, meet quality benchmarks and have meaningful drug information at the point of care. Patient satisfaction and health are enhanced as the clinical pharmacist is able to provide drug use education, enhance self-management skills, and lower drug costs through formulary adherence and consolidating complex medication regimens. Expanding these services has the potential to produce health care savings for payers as well. This is one of the reasons CCNC undertook this project. The fact that there is interest in expanding the project speaks for itself.

Ed Bujold, MD practices in Granite Falls and his practice was one of the initial project sites. He offers the following perpective on the program:

The Physician Perspective

By Ed Bujold, MD
Granite Falls Family Medical Care Center
Granite Falls, NC

I was approached by Neil's group a few years ago concerning embedding a PharmD in my medical practice to help us with the management of patients with complex medication regimens. Initially, we targeted several types of patients considered to be in what we will call a "high risk" category. This included patients with frequent visits to the emergency room and frequent inpatient admissions (we had designated these patients as "frequent flyers"). We also targeted patients taking six medications or more for their chronic diseases and patients who had become difficult management problems (uncontrolled hypertensive patients, diabetics with HgbA1C levels way over their target goals, etc.).

We are in the process of becoming certified as a level III Patient Centered Medical Home (PCMH). Ironically, when I was approached about this pilot project, our practice was thinking about how we could add more members to our "team" to enhance the care of our patient population. Being in a very small practice (one physician and two mid-level providers) it is very difficult to support more personnel on a full-time basis. This model was ideal for us. By partnering with the Medicaid CCNC program (that had been developing the patient centered medical home concept starting almost 15 years ago) Medication Management, LLC allowed us to further refine our own PCMH. CCNC had a presence in our practice with their community nurse. We already had a great relationship with our CCCN community nurse who worked closely with our practice in regards to chronic disease management. Having a PharmD help us with chronic disease management just makes my job easier.

In a PCMH concept, the doctor functions more like a CEO, but as medical care has become more sophisticated, successful physicians need to delegate more of their responsibilities to other team members. In talking with experts in PCMH development, it is the physician who frequently impedes the development of highly functional medical practices by micro managing their practices. Physicians need to be aware of all aspects of their patients care, but the care can be greatly improved by adding additional, highly qualified members to the care team. Qualities that allow physicians to survive and prosper in medical school and residency training don't always translate as well as the head of a PCMH. A different skill set must be developed and nurtured.

We are still learning how to use a PharmD in our practice. Based on some work I did with Troy Trygstad of CCNC and Medicaid inpatients, I realized medical reconciliation when patients moved from the hospital setting back to their PCMHs was very problematic. We are currently analyzing data which suggests one in every five patients discharged from the hospital had a medicine related error which potentially could lead to hospital readmission within one month of their current discharge. Based on this information, our practice has added another detail to our PharmD's job description – reconciling medications as patients move from the hospital setting to the home setting and then reintegrating with their PCMH. I have also utilized this valuable asset to explore treatment options in patients with rare diseases, particularly when they have been frustrated by treatment options from my subspecialty colleagues. A PharmD can spend two hours researching current literature and give me a synopsis of current and new treatments available which I can process in five minutes and use this information to help my patients.

I have a number of my diabetic patients on insulin pumps. There are very well qualified diabetic nurse managers who can teach my diabetic patients how to adapt to life with an insulin pump. I could do all of this teaching myself but it is really an inappropriate use of my

time. I need to concentrate on helping my diabetic patients meet their target goals in the chronic disease management model. I view the addition of a PharmD in similar fashion.

Financially, this team member costs pennies on the dollar and certainly could be reimbursed from a patient per member management fee much like CCNC does with Medicaid now. If we move away from our current method of payment and added patient per member per month management fees to Medicare and third party payers we would have no problem affording this addition to our PCMH team. Also, with the information provided by the PharmD in our practice we have been able to move a number of Evaluation and Management charges from 99213 to 99214 or 99215.

As we refine my own PCMH, I would like to add additional team members to my medical home using much the same "Circuit Riding" model. Sharing community health nurses and PharmD's with other practices makes me think we should use this same model to address the one other glaring deficiency in my medical home model, mental health care. Of all the innovations I have pursued and explored, these two additions have been more valuable than any other to my medical practice.

Behavioral Health Overview and Medicaid 2014: Meeting the Needs of the Most At-risk Patients

By Jerry McKee PharmD, MS, BCPP, Associate Director of Behavioral Health Pharmacy Programs, NC Community Care Networks
and

Michael Lancaster, MD, Director of Behavioral Health Programs, NC Community Care Networks

The Community Care Networks of North Carolina (CCNC) behavioral health initiative will focus on the need for building infrastructure for mental health and substance abuse services that are effective, well-coordinated, and have measurable outcomes within primary care practices. A reasonable question might be "Why are the North Carolina Division of Medical Assistance (DMA) and CCNC interested in behavioral health issues?" The answer is varied, but consider that there are currently over 1 million covered lives within the North Carolina Medicaid population. National Institute of Mental Health (NIMH) statistics point out that mental illness is common in the United States, and in a given year approximately one quarter of adults are diagnosable for one or more mental health disorders. NIMH conservatively estimated (2002 data) the total costs associated with serious mental illness, those disorders that are severely debilitating and affect about six percent of the adult population, to be in excess of $300 billion per year. From 2006 data, among all Americans, 36.2 million people paid for mental health services totaling $57.5 billion, with the average expenditure per person being $1,591. In the 10 year period between 1996 and 2006, a growing number of Americans paid for mental health services, with the costs of that care increasing by 87.6% and total expenditures on mental health services increased 63.4 %. Further, studies in the 1980s and early 1990s began to indicate that upwards of five to twelve percent of primary care patients met diagnostic criteria for major depression. These patients were also shown to have high numbers of medically unexplained symptoms as well as a greater degree of comorbid medical illness compared to non-depressed individuals, and up to two-fold higher rates of utilization of the healthcare system with associated increased costs. One actuarial firm projected that, without significant and sustained improvements in the United States healthcare system's ability to deal more effectively with the behavioral health disorders seen in primary care, an additional $130 to $350 billion will be spent annually for additional service use for this population.

Clearly this is a population that we can no longer afford to ignore. The one year prevalence rate for depression in the US is 6.7%, with a higher lifetime likelihood of occurrence in the 18 to 59-year-old population. This has significant implications for patients, families, employers, and payors. Individuals with depression and substance use issues often present to primary care providers with somatic complaints and medical illnesses which often accompany behavioral health matters. One study found that nearly 70% of all health care visits have a psychosocial component as part of the presentation. Studies have estimated that 67% of all psychopharmacologic medications are prescribed by primary care physicians, in part due to limited psychiatric service accessibility and attempts to meet a care need. North Carolina data demonstrates that over 40% of the aged, blind, and disabled population has at least one behavioral health diagnosis, in addition to multiple medical comorbidities. Individuals with behavioral health disorders have been demonstrated to consume disproportionate amounts of healthcare resources compared to age-matched control populations without such disorders. Further, primary care and psychiatry providers are present in inadequate numbers to effectively manage this population, and are poorly distributed geographically throughout the state. The intent of the Behavioral Health Integration program is to address these concerns as we move toward comprehensive health reform

Michael Lancaster, MD, a board certified adult and child/adolescent psychiatrist with a wealth of clinical and administrative healthcare experience, began the CCNC effort to plan, implement, and evaluate behavioral health initiative on behalf of DMA. He has assimilated a support team that includes network psychiatrists, behavioral health care coordinators, and a psychiatric pharmacist program facilitator. Jerry McKee, PharmD, MS, BCPP, a board certified psychiatric pharmacist, is the CCNC behavioral health pharmacy coordinator, with a leadership role for the direction and management of behavioral health pharmacy projects as well as creating and managing programs that address new policies as DMA implements them. He serves as a resource to network psychiatrists, pharmacists, and care managers on psychiatric and general drug information, as well as Medicaid pharmacy policy issues related to behavioral health. Further, educating and training, or coordinating the education and training of staff on behavioral health initiatives and support processes such as Medication Reconciliation are key aspects of his duties. Overarching objectives are to assure safe, effective, appropriate, and economical use of medications to improve continuity of behavioral healthcare and

associated desired outcomes.

Current core initiatives of the behavioral health team include promoting generic prescribing of antidepressants in treatment naïve patients or those not responding to current therapies, developing a safety monitoring process for antipsychotic agents used in children, and improving recognition and referral of patients with substance abuse disorders. In addition, ongoing efforts are in place to support a statewide initiative to more effectively and safely manage chronic pain and the use of narcotic medications.

The backdrop of 2014 is important as Medicaid coverage for many with behavioral health diagnoses will expand in 2014. It is projected that 400,000 to 600,000 additional covered lives will be added to the North Carolina Medicaid population at that time. Much of this increase will be in the adult demographic aged 21 to 64. The implications are that this population includes a significant number of individuals with substance abuse (alcohol, tobacco, and drugs) and depression that previously had no access to health coverage. There are a variety of pharmacotherapies to support abstinence in persons with substance abuse illnesses, and pharmacists have the opportunity to be actively involved in the recognition/referral of patients with these disorders, as well as educating towards treatment adherence.

Improving current behavioral health programs, as well as preparing for the changes of 2014 are the opportunity/challenge for pharmacists and primary care providers (e.g., establishing meaningful relationships with psychiatry, re-visiting their own therapeutic knowledge of MH drugs, etc.). The magnitude of coverage changes taking place for previously unsupported population in 2014 highlights the need for advance preparation and infrastructure building for behavioral health services that is both effective and well-coordinated. There is great opportunity here for partnering with all clinical service providers, including behavioral health specialists, as behavioral health disorders are similar to chronic medical illnesses such as diabetes in both the importance and difficulties of self-managing drug therapies. In addition, with the documented significant co-occurrance of behavioral health and medical issues in the primary care patient population, in order to effectively impact medical outcomes, the behavioral health aspect of care must be addressed. No treatment and/or ineffective treatment of behavioral health issues leads to poor outcomes for both aspects of care, negatively impacts quality of life, and increases physical health service use and costs. One of the challenges for pharmacists in particular is increasing their comfort level with behavioral health matters (more effectively interacting with this population, gaining a clearer understanding of psychopharmacology issues in order to provide effective medication management services, screening for and recognizing behavioral health related illnesses, and understanding their local behavioral health referral system). The position of pharmacists is similar to that of many primary care providers who have been thrust into the role of serving populations with behavioral health issues. It is the goal of the CCNC behavioral health team to provide practicing pharmacists with the tools and supports to enable this step to occur.

Technology's Role in Care Coordination and Population Management

By Cheryl A. Viracola, PharmD
Pharmacy Programs Coordinator, Community Care of Wake and Johnston Counties

The CCNC "Informatics Center" is an electronic data exchange infrastructure that contains health care claims data provided by Medicaid. Initially, information was accessed by the Community Care networks to identify patients in need of care coordination; to facilitate disease management, population management, and pharmacy management initiatives. In addition, information accessed via the Informatics Center has enabled communication of key health information across settings of care. This communication helps to; monitor cost and utilization outcomes; promote quality of care and provide performance feedback at the patient, practice, and network level. It has long been the vision of Community Care, even during the infancy of the Informatics Centers development, that utilization of this application could be made available to community providers to support quality improvement and continuity of care of their Medicaid patients. In 2010 following the Informatics Center launch of its newest "Provider Portal" application, Community Care of Wake and Johnston Counties developed a full scale operation to educate and provide access to the providers in their network. As of December 2010, more than 115 primary care providers at 30 of its participating practices have been granted Active User status.

The key applications of the Informatics Center are the Pharmacy Home Project (PH), the Informatics Center Report Site (IC) and the Provider Portal. The Pharmacy Home Project was created to support pharmacy management initiatives, and address the need for drug use information that could be easily translated by network pharmacist, care managers and primary care providers. The system is set up to provide patient level profiles and medication histories as well as population-based reports to identify patients who may benefit from Medication Therapy Management. The Pharmacy Home drug use information database is used prospectively for multiple purposes: for identification of care gaps and problem alerts; targeting of at-risk patients; development of the pharmaceutical care plan; and proactive intervention to assist providers and patients with therapeutic substitutions. Retrospective uses of the Pharmacy Home database are equally important, to enable efficient and timely analyses needed for continuous quality improvement and program evaluation.

The IC Reports Site was created to allow efficient and secure distribution of patient level reports to appropriate end users. Network administrators are capable of customizing access of these individual reports by practice or region. Reporting capacity of this application includes:

Population Needs Assessment: Identification of demographic, cost, utilization, and disease prevaleace patterns by service area. Networks can readily obtain information about the demographic characteristics, prevalence of chronic medical and mental health conditions, spending by category of service, and rates of hospital, ED, and other service use within their county-level service areas. This aids in program planning and resource allocation; identification of outlier patterns (such as unusually high rates of personal care services); and tracking of local utilization

patterns over time.

Risk Stratification, Identification of High-Opportunity Patients, Patient-level Information. The size and complexity of the Medicaid population, in terms of physical health, mental health, and socio-economic needs, necessitates intelligent mechanisms for identifying patients most appropriate for care management interventions, particularly in the face of limited resources. The use of historical claims data to screen patients for care management intervention can greatly improve the efficiency of the care team. Within this database, patients can be flagged who meet specified criteria for further screening by a care manager, according to patterns of service use over the prior 12 months (such as multiple ED and inpatient visits, multiple medications, lack of PCP contact, target medical conditions, and high cost). Similar reports are generated for specific initiatives or pilot programs (for example: identification of patients with newly diagnosed asthma, heart failure, and diabetes; identification of patients receiving controlled substance prescriptions from multiple sources; identification of patients with poor adherence to their blood pressure medications).

Monitoring of ED and Inpatient Visits. A number of detailed utilization reports are generated automatically updating with every claims payment cycle. As an example, the user can readily access a listing of ED visits by their enrolled population. The report can be broken down by hospital, PCP, patient or visit characteristics; and can tally visit counts by patient or practice. A similar report is available for inpatient hospitalizations. These reports serve to answer a variety of questions (e.g., Are patients from my clinic having a high number of non-emergent ED visits during regular office hours? How many heart failure discharges were readmitted within 30 days, and did they bounce back to the same facility or a different location?) and for identifying impactible patients in a timely fashion (e.g., here is a list of all patients with an asthma-related ED visit, let's make sure they have a follow-up PCP visit scheduled).

Tracking of Care Quality Indicators. Reports include measures that can be viewed across practices, county, network and state level as it relates to diabetes, asthma, heart failure, cardiovascular disease, pediatric well visits and dental care, and adult breast, cervical, and colorectal cancer screening.

Program Evaluation and Tracking of Key Performance Indicators. The IC Reports Site also enables program performance tracking for monthly reporting to the state Medicaid agency and state legislature. Tracking of key metrics provides stakeholders with assurance that efforts are aligned toward the overarching goals of cost savings and quality improvement, and that all networks are held accountable for the overall performance of the program. Key indicators include both process measures (such as percent of targeted hospitalized patients receiving medication reconciliation) and outcome measures (such as hospitalization, ED, and readmission rates).

The Informatics Center Provider Portal released in August of 2010 was built with the treating provider in mind, offering elements of the Pharmacy Home, and the Informatics Centers Report Site, tailored to the target user. Treating providers in the primary care medical home, hospital, emergency room, or mental health system can access a Medicaid patients health record which includes patient information, care team contact information, visit history, pharmacy claims history, and clinical care alerts. Importantly, the use of Medicaid claims data provides key information typically unavailable within the provider chart or electronic health record. For example, providers are able to see encounter information (hospitalizations, ED visits, primary care and specialist visits, laboratory and imaging) that occurred outside of their local clinic or health system. Contact information for the patient's case manager, pharmacy, mental health therapy provider, durable medical equipment supplier, home health or personal care service provider is readily available. Providers can discern whether prior prescriptions were ever filled, and what medications have been prescribed for the patient by others. Built-in clinical alerts appear if the claims history indicates patient may be overdue for recommended care (e.g., diabetes eye exam, mammography).

The Provider Portal also contains key resources for assisting providers in the management of Medicaid patients, such as a compendium of low-literacy patient education materials, and practice tools for risk assessment and disease management. Through a seamless link into a licensed service maintained by an outside partner, providers can retrieve medication information for patients in multiple languages, in video or print format. Medical home providers may directly access population management reports and quality metrics for their own patient population through a seamless link into the Informatics Center Reports Site.

In the Community Care of Wake and Johnston Counties network one practice in particular, Wake County Human Services (WCHS) Child Health Clinic, has been utilizing the information available through the Informatics Center and Provider Portal to inform their quality initiatives. They have been focusing primarily on their asthma population and began using the reports initially available, including the report of Emergency Department visits and beta-agonist overuse.

Treating pediatric physicians Elizabeth Tilson, MD and Andrea Newman, MD have reviewed their practices reports in order to identify patients who are utilizing the Emergency Department for asthma exacerbations or who may be overutilizing their asthma rescue medicine (beta-agonist medicine). Both of these findings may indicate patients with poorly controlled asthma. Once they identify possible patients, they review the visit history to get a better understanding of all the sites of care for a patient, including visits to the primary care provider. They also review the pharmacy history via Pharmacy Home to assess for beta-agonist overuse and compliance with controller medications.

For example, one child they identified using these strategies had eight asthma-related emergency room visits, three asthma-related urgent care visits for asthma exacerbations, and no primary care visits in the past year. Review of his pharmacy history revealed six courses of oral steroid pulses and three instances of beta-agonist overutilization in the past year. The last fill of a controller medicine was one year in the past. Based on this history, the child was referred for nurse care management via Community Care of Wake and Johnston County. A nurse educator was able to complete a home visit and work closely with the mother and child on asthma management, including the importance of controller medications and close follow up with the primary care provider. The patient was also scheduled for a visit with the primary care physician who reinforced the importance of regular

asthma care and ensured the child had a ready supply and refills of their controller medication and a spacer. Since that time, the child has had no further emergency room visits for asthma.

A second child they found utilizing these strategies had no asthma-related emergency department visits, but had two primary care visits for exacerbations in the past year. A review of the pharmacy revealed the child had seven separate fill dates for a beta-agonist in the past year and only one fill date for a controller medication in the past year- ten months prior to the date of the review. The patient was also referred for nurse care management, the medication history was shared with the primary care provider, and the patient was restarted on a controller medicine.

When the more robust practice-level Clinical Alerts reports became available in 2010, they began to use the Asthma Care Alert reports. By doing so, they identified another 77 patients who have some indication of poorly controlled asthma and began work on addressing those patients' needs.

According to the eHealth Initiative's 2010 Annual Survey, Health Information Exchanges are leading the way in improving the safety, and efficiency of patient care. The primary goal is that consumers and health care providers will have ready access to timely, relevant, reliable and secure information and services through an interconnected, electronic health information infrastructure to support better health and healthcare. As the Informatics Center continues to evolve in 2010 with the incorporation of data resources such as Medicare claims and Surescripts pharmacy data for dual eligibles, Labcorps (laboratory results), and real-time hospital admission/discharge/transfer data from 48 large NC hospitals, it will undoubtedly become one of the most robust Health Information Exchanges in the state. ❖

Online Offerings: Pharmacist Refresher Course & QA/Law

NCAP has partnered with the Connecticut Pharmacy Association to offer The Pharmacist Refresher Course, an online course designed for pharmacists who wish to return to community pharmacy practice after an absence from practice for three or more years. The course consists of three modules, all of which have been approved for ACPE credits. The first two modules are online and composed of weekly study segments that allow course participants to work at their own pace, on their own time. The third module consists of a three-week, 90-hour live experience in a community pharmacy. Only those who participate in all three modules will earn a Pharmacist Refresher Course Certificate from Charter Oak State College. Those taking modules One and/or Two for personal enrichment will earn ACPE credits through CPA. This course will give home study law credit to any pharmacist wanting to learn about quality assurance strategies and North Carolina's pharmacy laws.

The QA/Law Course can be used to prepare for reciprocity into North Carolina, or for those who want an update on Pharmacy Law and Quality Assurance. Students must follow a two-week course schedule. Online discussion boards and instructor monitoring and interaction keep you on track throughout the course. The course is offered the first two full weeks of every month. This course is accredited by ACPE for 15 hours of home study law education. For more information visit www.ncpharmacists.org.

Growing Community Pharmacy Residencies

By Morgan Norris, PharmD
Executive Resident, NCAP

In 1986 the American Pharmacists Association (APhA) established a PGY1 Community Pharmacy Residency Program (CPRP) in order to develop creative and innovative new pharmacists for the contemporary community practice setting. In 1999, the American Society of Health-System Pharmacists (ASHP) and the APhA partnered together to begin accrediting CPRPs that represented the ideal community pharmacy residency while advancing pharmacy practice in a community setting.[1] Over the past 24 years, growth of CPRPs has been modest at best, with only 13 residency sites with 20 positions nationwide in 1997-98.[2,3] Currently there are 82 sites with 93 positions, which is a decrease from 2009 which had 89 sites and 97 positions.[4] Many CPRPs are partnerships between schools/colleges of pharmacy and community pharmacy practice sites or independent programs run by community pharmacies, chain corporations, or health systems.[5] Partnerships have helped increase the number of residencies throughout the years along with grants given by pharmacy organizations and pharmaceutical companies.[6,7] While there has been growth in CPRPs over the years, in order to prepare for ACCP's vision 2020, which states that all pharmacy graduates would be required to complete a pharmacy residency, the number of residencies and community pharmacy residencies need to increase dramatically; however, that is easier said than done.[8] At a roundtable discussion for CPRP attendees and stakeholders, it was determined that the number of CPRPs must grow significantly by 2015, but how does this happen in light of all the barriers of starting or growing residency programs?[9]

To increase the number of residencies, two major things need to happen. First, increase the number of preceptors and residency sites and second, demonstrate the value of residency training to everyone involved; which is easier said than done.[9] Whether starting a program or building on an existing program, a lack of leadership, revenue, and reimbursement for residents seem to be rate limiting steps. Many graduates want to complete a residency, but without someone to mentor them and take hold of the reigns of a program, it is not possible. Revenue is another critical part of a residency program. Although services offered by CPRPs are valuable, without any revenue to support them, they are hard to continue. Reimbursement for the resident is another major concern for many potential programs.[9] Many residents get a stipend anywhere between 27,500-52,000 dollars and although residents can generate income, it may not be enough to support their position.[10] These are not the only barriers to the growth of CPRPs. Accreditation, the application process, site visits, and cost are often a daunting task that not everyone is willing to undertake. Operational and logistic barriers such as geographic location, lack of human resources, physician contact, patient data to support a program, technology, and a collaborative partner are other barriers affecting growth.[9] While many challenges exist, there are many ways to overcome them.

Leadership, revenue, and reimbursement for residents are major barriers to the growth of CPRPs and while difficult to overcome, it is not impossible. Leadership challenges can be overcome by showing the need for CPRPs and their impact on the community. Many residency-trained pharmacists are prime candidates for precepting and mentoring residents. As long as pharmacists are willing to mentor graduates, leadership will not be a problem. Revenue challenges can be overcome by implementing programs that are revenue positive, or at least neutral. Some programs that have been successful thus far are medication therapy management and immunizations. In order to continue to bring in revenue, pharmacists need to continue to offer value-added services to the community and get reimbursed for them. Grants are available to assist CPRPs with reimbursement for residents. In 2000, the Institute for the Advancement of Community Pharmacy provided almost 900,000 dollars worth of grants in order to support new and existing programs.[6] Pharmaceutical companies also fund residencies and there are other grants available. In December 2010, NACDS announced plans to contribute 1.5 million dollars in grants to expand CPRPs, which will be enough to start 30 new programs.[7] While this will increase the number of CPRPs, there will need to be more since community pharmacists are very accessible to the general public and have a lot to offer for direct patient care.

Two UNC Eshelman School of Pharmacy professors, Stephen Caiola, Associate Professor and Chair for the Division of Pharmacy Practice and Experiential Education, and Stefanie Ferreri, Clinical Associate Professor for the Division of Pharmacy Practice and Experiential Education and Director of the PGY1 Community Pharmacy Residency Program, answered questions and shared the following information regarding CPRPs.

What makes CPRPs different than other residencies?

The business plan function, defining a doable business model, and looking at and studying resource management of the pharmacy and all it entails such as:

- What you need, products, system of suppliers, payers, and the needs of the community
- Human resources and fiscal business aspects
- Looking at what the public needs: blood pressure monitoring, diabetes management, cholesterol management, asthma management, or over-the-counter help
- Making sure you have the right support to make the clinical services available
- Matching the consumer needs
- Looking at a wider variety of payers and products versus the inpatient setting

Marketing is also a major component to the business plan – what good is a service if you don't have anyone (i.e. a doctor) referring patients to you? Increasing the patient care services through direct patient care and knowing that patients are the costumers in the community setting versus an inpatient setting. In the community you have to market to many people, not just one or two.

How have CPRPs changed since they began in 2000?

- Expanded in numbers and now have multiple sites
- Monthly seminars held to discuss community related issues and for education
- MTM started in 2006 and changed patient care
- Numerous patient care and clinical services have been started
- Immunizations have enhanced patient care activities
- Currently seven residency trained preceptors

• Publications to report cutting edge patient care
• More structure and rigor have caused a higher quality
• More assessment oriented
• External (outside of pharmacy walls) value-added services have been started such as visiting rest homes and community centers conducting medication reconciliations

What projects have been successful?

• Medication Therapy Management
• Employer-paid groups that pay for patient education to employees
• Immunizations
• Grants from different organizations such as APhA and ACDS
• ADA Diabetes education
• Medicaid audits/Medicaid discussion
• CPP working in the doctor's office one day a week
• Reporting cutting edge practice changes and residency research projects
• Becoming politically active

What have been lessons learned?

Ferreri said she gets calls from people wanting to start a program, but they do not realize what it takes. Starting a residency is a lot of work and not something that is done overnight. It takes six to ten months of preparation before a resident is at a site, and there is a lot of paperwork and documentation to be done for accreditation. Another lesson learned was marketing. In the beginning, it was not working, and they soon learned that patients want services to be covered by their insurance and those services need be marketed appropriately to target consumers.

How do you see CPRPs changing in light of health care reform?

Caiola noted that what will change in CPRPs depends on many things, especially services that receive reimbursement. It is up to pharmacy to be politically and professionally active and show politicians a model in which value is demonstrated, both in health care and economically. However, value should be broadly interpreted in the sense that drug cost will increase but overall health care cost (hospital admissions and re-admissions) will decrease. If pharmacy builds political activity on substance and evidence and can prove that it provides a valuable service, pharmacy will have an unlimited future. He also believes that pharmacy needs to be part of the health information exchange (HIE) and contribute to the medical record. If pharmacy does not step up, someone else will.

Ferreri added that documenting and publishing the patient care practices we are implementing is another change occurring within CPRP, as well as community residents getting involved with the medical home.

What needs to change in the pharmacy curriculum to have new graduates ready for practice?

Caiola said pharmacy should require a residency or increase the length, depth, and quality of experiential programs. Maybe double the last year of experiential rotations and have more demanding roles for students; increase the number of inpatient, ambulatory care, and community pharmacy rotations. Students need more experiences that meet more advanced objectives, but for now they are just introductory. Also, students need to work with outcomes and MTM more than just one time and increase the patient interface experience.

UNC has the OSCE's (objective structured clinical exams) which are four in-depth patient work-ups and interviews that are videotaped with three patients each and incorporate MTM. The OSCE's also increase the students' communication skills.

Overcoming cultural diversity is another issue that needs work.

Making pharmacy school run four years straight with only breaks after the summer programs, or stopping pharmacy school after two years and starting experiential education might help. If experiential education happened in the last two years of school, it would be equivalent to a residency.

Why do some pharmacists prefer to hire residency trained pharmacists vs. new graduates?

Residency trained pharmacists see the whole spectrum and have more practice.

Community pharmacists are one of the most accessible health care providers and as such, shouldn't they train for more advanced roles in light of health care reform? With millions of people on the brink of health insurance and a shortage of primary care providers, it makes sense that pharmacists play more of a role in direct patient care which is exactly what community pharmacy residency programs prepare them for. ❖

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IHI Open School: A Resource for Pharmacists and Technicians

By Bob Cisneros, PhD
Assistant Professor, Campbell University College of Pharmacy and Health Sciences

The IHI (Institute for Healthcare Improvement) was created in the late 1980's by a group of professionals led by Donald Berwick, MD. Berwick's name may sound familiar as he was recently appointed by President Obama as the new Administrator of CMS (Center for Medicare and Medicaid Services).

The purpose of the IHI described on its website is:

"We aim to improve the lives of patients, the health of communities, and the joy of the health care workforce by focusing on an ambitious set of goals adapted from the Institute of Medicine's six improvement aims for the health care system: Safety, Effectiveness, Patient-Centeredness, Timeliness, Efficiency, and Equity."[1]

The IHI summarizes its goals as its "No Needless" List which is listed in Table 1. Improving the quality of healthcare has been a goal of paramount importance to the IHI.

Numerous projects and programs have been initiated by IHI. One IHI program which will be described here is known as the IHI "Open School" (http://www.ihi.org/IHI/Programs/IHIOpenSchool) which could be of great value to pharmacists, as well as pharmacy technicians and students.[2]

Table 1. The IHI "No Needless" List[1]

- No needless deaths
- No needless pain or suffering
- No helplessness in those served or serving
- No unwanted waiting
- No waste
- No one left out

IHI Open School

The Open School offers students and professionals numerous activities and programs related to quality and healthcare. The site offers resources which include online courses, a discussion board to exchange ideas regarding safety issues, audio conferences, video interviews, podcasts, case studies, articles, references, opportunities to develop student chapters, newsletters, faculty resources, etc.[3]

According to the IHI, a "modest subscription fee" is charged for professionals who would like to complete the online courses. Continuing education credit is available for nurses, physicians, and pharmacists. The material covered is applicable for all healthcare professionals including pharmacists (and pharmacy technicians), nurses, physicians, healthcare administrators, as well as healthcare students. The courses are free for students and medical residents.

The online Patient Safety course was recently incorporated into a Medication Error elective course at Campbell University College of Pharmacy and Health Sciences. At the time the elective course was offered, four online modules were available. Two other modules have since been added by IHI. Students in the Medication Error course were required individually, as one component of the course, to satisfactorily complete one module per week. The information from the online material was also incorporated into classroom discussion. Each module is composed of three to four lessons. A module usually takes approximately 60-90 minutes or less to complete. Assessment quizzes are incorporated into each module. According to IHI, a score of 75% or higher is required to pass each quiz. The students found the use of the online modules helpful as a part of the Medication Error course.

There are some options as to how to monitor completion of a course by an individual. An individual could simply print the final score report after completion of the online quiz. For a small fee, IHI can arrange for an individual, such as a course teacher or manager, to have online access to individual scores, progress, dates of completion, etc.

Though each module was not designed strictly for pharmacists, the information and focus of each module can readily be applied across all disciplines. Table 2 lists available online courses.

Table 2. Online IHI Courses[4]

Patient Safety
PS 100: Introduction to Patient Safety
PS 101: Fundamentals of Patient Safety
PS 102: Human Factors and Safety
PS 103: Teamwork and Communication
PS 104: Root Cause and Systems Analysis
PS 105: Communicating with Patients After Adverse Event
Quality Improvement
QI 101: Fundamentals of Improvement
QI 102: Model for Improvement: Your Engine for Change
QI 103: Measuring for Improvement
QI 104: Putting It All Together-How Quality Improvement Works in Real Health Care Settings
QI 105: The Human Side of Quality Improvement
QI 106 Level 100 Tools
Leadership
L 101: So You Want to be a Leader in Health Care

Pharmacy Uses

The opportunities presented by the IHI Open School can be particularly useful as one part of the orientation, training, and/or development of pharmacists, technicians, and students. Portions of any of the modules might be useful to present and discuss at pharmacy staff meetings or in-services for other health professionals. See Table 3.

The best advice is to review the material available through the Open School and determine what might best fit into the working environment of one's own practice. The IHI has a track record of being committed to patient safety through various activities. Its Open School can be a valuable resource in pharmacy practice. ❖

Table 3. Possible Pharmacy Uses of the IHI Open School

- Training of pharmacy technicians/pharmacists/students
- Ongoing staff development
- Present/use information as topics for discussion at staff meetings
- Incorporate into coursework by Schools/Colleges of Pharmacy
- Continuing Education opportunities

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Precepting as a New Practitioner

By Kira Brice PharmD, BCPS, Anthony Pudlo PharmD, MBA, and Jeffrey Tingen PharmD, MBA, BCPS

After establishing a pharmacy practice, many new practitioners view precepting as the next step in their pharmacy career. With the expansion of schools of pharmacy (SOP) and satellite campuses across the state, the opportunity and need for new preceptors and rotation sites has grown tremendously. However, many new practitioners may be uncertain as to how to establish a site or develop a rotation for student pharmacists. Creating a rotation includes preparing the site and student expectations, designing rotation activities and evaluating the student pharmacist.

Preparation

Rotation development should begin with the creation of a syllabus and calendar. In addition to setting student expectations, a syllabus serves as an organizational tool and ensures all necessary components are included in the rotation experience. Each SOP provides a basic syllabus that includes school specific requirements that should be consulted and expanded upon to include site specific information. A well-designed syllabus should include, but is not limited to, the following.

1. Rotation description and objectives: These are based on the type of rotation and the knowledge and/or skills the student should master upon completion of the rotation. These may vary based on the practice setting and the year in pharmacy school. An introductory hospital rotation for a first-year pharmacy student should have very different objectives from a fourth-year clinical rotation.
2. Student expectations: Includes work hours, dress code, daily activities, rotation projects, and any items the student should bring to rotation (e.g. stethoscope, drug information resources). May also contain consequences if expectations are not met.
3. Learning resources: Resources the student may need on rotation including drug information and educational materials or relevant institutional policies.
4. Rotation activities: See below
5. Rotation schedule or calendar: Should include any meetings, due dates, other rotation activities.
6. Grading policy: Policy for the rotation and rotation activities should be clearly outlined and evaluation forms provided to the student when available.

A thorough orientation including a rotation site tour, introductions to other providers who play roles in the rotation and a review of the syllabus and calendar lay the groundwork for a successful rotation.

Rotation Activities

The development of rotation activities can be a challenging aspect of precepting student pharmacists. It is important that rotation activities are designed to improve the student's knowledge and skill set. Additionally, the student should understand the purpose behind each activity that he or she is performing and how it relates to the preceptor's practice of pharmacy or to the educational goals set by the SOP.

An excellent starting point for developing and determining rotation activities is to reflect back on what activities you were engaged in as a pharmacy student. It may be beneficial to choose activities that you felt were most beneficial to your education. Also, many SOPs provide preceptors with a list of ideas for rotation activities. Examples include journal club discussions, drug monographs, pharmacy calculations review, patient education brochure, and topic discussions. Rotation activities are not just for the benefit of the student. They can also benefit patient care and strengthen the preceptor's knowledge on a particular subject. Also, rotation activities do not have to solely rely on the interaction between the preceptor and the student. It is acceptable for the student pharmacist to work with other pharmacists and healthcare professionals as long as it relates to the goals and objectives for the rotation.

Evaluations

Preceptors are required to assist in monitoring student performance, identifying strengths and weaknesses, and providing remediation to ensure student pharmacist development in established experiential competency areas. The evaluation process can be a dreaded time

for most pharmacy practitioners. For new practitioners, the preceptor responsibilities for evaluation come with added stress in their new career. However, there are advantages for new practitioners to make the evaluation process effective for both parties involved. For example, student pharmacists tend to relate to new practitioners due to the close proximity in age and professional growth.

Here are some tips for working with student pharmacists during the rotation:

1) Take every opportunity to provide feedback
   a. Use formal mid-point and final evaluations to compliment casual feedback encounters after case presentations or patient encounters.
   b. When constructive feedback is provided with consistency, the student is left with no surprises when final evaluations/grades are submitted.

2) Use various methods to gauge student progress throughout the rotation
   a. Assess student learning habits early in the rotation to ensure the best learning environments. This doesn't have to be a formal process, just a casual discussion on how the student pharmacist learns best.
   b. Ensure the student pharmacist knows how you will provide feedback and how you expect feedback to be received.
   c. Take notes throughout the rotation on how the student pharmacist is doing and how well you as a preceptor have done in this role

3) Be personable about the evaluations
   a. Know that feedback sessions should be two-way means of communication. Listen to the student pharmacist to help guide their thought process more than just letting them know they incorrectly completed a task.
   b. Ensure student pharmacists know you are there to guide them. Bring your recent experiences as a student pharmacist to help them understand the importance of self-reflection in improving behavior.

Constructive and regular feedback to the student pharmacist is necessary to allow for professional growth. It should not be a process that is feared or overlooked as a preceptor. To ensure a student pharmacist becomes a better practitioner, the new practitioner needs to fully utilize their responsibility as a preceptor in orienting a student, engaging them in meaningful activities, and providing thorough feedback. ❖

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NPN Member Spotlight:

John B. Hertig, PharmD, MS

I was born in Southern California, but grew up in Massachusetts (Boston-area). Despite having lived on both coasts, I decided to head to the Midwest to attend Purdue University where I received my Bachelors of Science in Pharmaceutical Sciences in 2005 and my Doctor of Pharmacy in 2008. Throughout my professional education, I had the opportunity to experience many pharmacy careers including small and large chain retail pharmacy, the pharmaceutical industry, and various roles in several health-systems. Although each practice area provides an opportunity to impact patient care, I realized I most enjoyed impacting global change. As such, I decided an administrative career path would be the best way for me to influence pharmacy practice broadly. To combine my administrative passion and still maintain a strong clinical practice interest, I completed a combined PGY1/PGY2 Masters in Health-System Pharmacy Administration residency at The Ohio State University Medical Center. As part of this program, I also received a Masters in Health-System Pharmacy Administration from The Ohio State University in 2010.

Today, I am the Coordinator of Administrative Services for the Department of Pharmacy at Duke University Hospital. In this role, I serve as a member of the Department's Senior Management Group (SMG). I support the overall strategic goals of the Department by assisting in planning, designing, implementing, and demonstrating the value of pharmacy services. Currently, I am involved in many key projects including: investigational drug software implementation, emergency preparedness planning, policy and procedure gap analyses, coordination of a pharmaceutical utilization management program, and building a pharmacy balanced scorecard to help measure performance and quality.

I strongly believe in professional involvement and have made it an integral part of my career. Specifically, I have been an active member of the American Society of Health-System Pharmacists since my time as a student at Purdue. My involvement in ASHP started with a student appointment to the Council on Pharmacy Practice in 2006. I was then selected to be a member of the Student Forum Executive Committee (SFEC) in 2007-2008. Following my service to the SFEC, I became a member of the Professional Practice Advisory Group for the New Practitioners Forum in 2008. I followed this by an appointment to the New Practitioners Forum Executive Committee (NPFEC) in 2009 as a Member and then was selected Chair of the NPFEC for the 2010-2011 term. I have also maintained a strong state and local commitment to the profession and have recently been appointed as a member of the NCAP New Practitioners Network (NPN) Executive Committee as the Acute Care Liaison. Involvement in the NPN and NCAP is very important to pharmacists practicing in North Carolina; this state practices progressively and it's important to maintain a high practice standard. I am passionate about the pharmacy profession and enjoy empowering my colleagues by developing and providing the resources needed to improve the lives of our patients. Staying active in professional organizations lends a unified voice to professional issues. I value mentorship, career development, and networking opportunities as great reasons to be involved. Today, more than ever, the profession needs young leaders to step up and get involved.

calendar

March 12: Technician Review Seminar, Raleigh

March 13: Technician Review Seminar, Greensboro

March 22: Pharmacy Day in the Legislature, Raleigh

March 24-26: Acute Care Practice Forum Meeting, Winston-Salem

March 26: Technician Review Seminar. Hickory

March 27: Technician Review Seminar, Charlotte

March 31-April 1: Chronic Care Practice Forum Meeting, Concord

July 8: Residency Conference, Greensboro

Aug. 5-6: Community Care Practice Forum Meeting, Myrtle Beach, SC

Oct. 23-25: Annual Convention, Greensboro

More information at www.ncpharmacists.org

Pharmacy Time Capsules

1986: Twenty-five years ago

• 38.5% of pharmacy graduates chose to work in chain community pharmacies for their first job while 18.9% chose independent pharmacies.

1961: Fifty Years Ago

• The American Association of Colleges of Pharmacy (AACP) opened its Washington office with Charles Bliven named first full-time executive secretary/treasurer.

• University of Michigan offers the first optional post-baccalaureate PharmD outside of California.

1936: Seventy-five Years Ago

• Subsection on Hospital Pharmacy formed within the APhA Section on Practical Pharmacy and dispensing with Iowa Dean Louis Zopf the first chair.

1911: One hundred Years Ago

• The School of Pharmacy at the University of Colorado at Boulder was established as a department of the School of Medicine.

1886: One hundred twenty-five years ago

• South Dakota Pharmacists Association, then known as the Dakota Pharmaceutical Association Southern District, was founded in Mitchell, SD

By Dennis B. Worthen, Lloyd Scholar, Lloyd Library and Museum, Cincinnati, OH

One of a series contributed by the American Institute of the History of Pharmacy, a unique non-profit society dedicated to assuring that the contributions of your profession endure as a part of America's history. Membership offers the satisfaction of helping continue this work on behalf of pharmacy, and brings five or more historical publications to your door each year. To learn more, check out: www.aihp.org

North Carolina Pharmacist

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The Pharmacy Workforce

Perspectives from across the state

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North Carolina Pharmacist

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Inside

The Pharmacist and the Patient-centered Medical Home and Accountable Care Organizations

One piece of advice I received when I took over NCAP ten years ago this July was "make sure you take care of independent pharmacy" because as they fair, so will the profession. It is true that because these pharmacists are more "invested" in the profession than employee pharmacists, they often give more back to the profession. I have observed that to be true in some situations. However, much of our volunteer leadership comes from employee pharmacists so their needs can not be ignored either. Thus, I have strived to support all pharmacy interests in my role as Executive Director of NCAP. In that role I have made some friends and also upset some pharmacists.

As my NCAP role winds down, will pharmacy practice as we know it be business as usual or will we have to begin addressing real change. One area that presents me with concern is how pharmacy will be integrated into the PCMH or the ACO. There may not be a "one size fits all" approach, but some type of formal relationship will be required.

As I depart, what advice would I give to my successor? It would be to make sure they position the pharmacists to take care of the patients. So, if health care in the new model will be delivered in PCMH, how should pharmacists be positioned to be able to take care of patients? Will pharmacists become employees of medical homes as the predominate model or will local pharmacies contract with PCMH's to provide that care decentrally. In ACO's will networks of pharmacy be owned by the ACO as the predominate model, or will local pharmacies be contracted to provide patient care? To me, this will be the critical question to be answered by our profession over the next five years. I hope I have positioned NCAP to be a strong player in helping to make these decisions. I look forward to being in a position in my next pharmacy role to help provide the answer.

If I was practicing community pharmacy today, I would be exploring ways to get my pharmacy integrated into a PCMH or ACO. I would be talking to the physicians in my community to see how they were trying to position their practices. I would be watching what the health systems in my area were doing to become an ACO. I would be talking to the Community Care of North Carolina Network leaders in my area to see how I might be able to expand my role in their network. I would make sure I was growing clinically too and getting whatever credentials I could to differentiate myself from other pharmacists. Rather than wishing for the return of the good old days, I would be excited by opportunity to grow professionally and open to changing my practice model.

The only thing certain about tomorrow is change. Let's work together to make sure the changes position pharmacists to take care of patients.

Fred M. Eckel
Executive Director

UNC Eshelman School of Pharmacy student Betsy Brinson administers an influenza vaccination during the Health Fair at Pharmacy Day in the Legislature.

Pharmacy Day in the Legislature

Pharmacy Day in the Legislature was held in Raleigh on Tuesday, March 22, 2011. The day began with a Health Fair in the Legislative Building where pharmacists and students were on hand to answer questions about medications and demonstrate the many health services made available by pharmacists. The health fair was followed by an information session to help pharmacists prepare for meetings with their representatives that afternoon. A reception for Legislators and attendees was later held at the North Carolina Museum of History. The event was hosted by the Association of Community Pharmacists, CVS Caremark, Kerr Drug, the National Association of Chain Drug Stores, the North Carolina Association of Pharmacists, the North Carolina Retail Merchants Association, Rite Aid and Walgreens.

North Carolina Association of Pharmacists
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Dear Members,

I last visited the North Carolina Legislative Building on a fourth grade field trip. I remember touring the building and sitting in the legislative sessions in the balcony above the House and Senate chambers. Despite our tour guides best efforts it was difficult to grasp what was occurring and how it affected my life. It all seemed above me.

I felt the same way when I returned to the legislative building a few weeks ago for Pharmacy Day in the Legislature. I still had the same sense of awe and felt like a kid wandering the halls, wondering how the work that occurs there affects my life. However, it does affect my life and yours. I took my folded up talking points and visited my Senator and Representative hoping to sound like a grown-up pharmacist and less like a fourth-grader giving a book report. I got lost in the maze that is the legislative building. But, after finding my Representative's office, I set about the task of educating him on the issue of expansion of immunizations for pharmacists. Representative Tom Murry helped us tremendously by giving us a glimpse into the day of a Legislator. He told us to explain our issue as if our Senator or Representative did not know anything about the topic, and more than likely they do not. In any given day they may be addressed by any number of groups seeking legislation, from power companies to pharmacists. As of this writing, there is a bill before the Legislature to expand immunization authorization for pharmacists. By the time this letter is published, it will hopefully have passed into law. As daunting as wandering around the halls of the Legislature can be, it is necessary to further the goals of pharmacy in our state. Thank you to all the pharmacists who participated. Also, thanks to all the pharmacy students who took time to participate in the health fair. If you were not there, plan to be there next year. We need you. Your profession needs you. Besides, the more pharmacists we have wandering around, the less likely I am to get lost.

As NCAP's president, I had a fantastic opportunity to speak at the UNC Eshelman School of Pharmacy White Coat Ceremony and provide a short welcome to the rising fourth-year students. Chapel Hill was dressed in all its springtime glory for the ceremony. Seeing pharmacy students at that point in their education is impressive. They have the whole world of pharmacy before them. These are the future pharmacists who will soon be the new leaders in pharmacy. Although over used, this is an exciting time to be a new practitioner in pharmacy. These students will most likely see explosive growth in medication therapy management, technology, and an expanded role for pharmacists in the medical home model. Their energy and enthusiasm for their profession reminded me of why I became a pharmacist. The experience impressed upon me the need to be a part of our rapidly changing profession and not watch the changes from the sidelines, simply collecting a check.

Both of these experiences, being at the Legislature and at UNC, illustrated to me how pharmacy is evolving. In this issue of the *North Carolina Pharmacist* you will find articles regarding the trends in pharmacy employment in North Carolina. New opportunities for our profession have been created by pioneering pharmacists who have pushed their way into all kinds of new practice settings. NCAP seeks to encourage and protect such endeavors as evidenced by NCAP's support of the Immunization Expansion and the Advanced Pharmacy Technician Rule. However, our greatest asset in this evolution of our profession is you.

Cecil Davis
President

Advancing Pharmacy. Improving Health.

The Pharmacy Workforce

Perspectives from across the state

Bust or boom?

By James Bowman, PharmD
Owner, Moose Pharmacy

Where does the pharmacist workforce stand on its journey forward? Do the current high salaries pharmacists earn of over $100,000 a year continue, or will they start to trend downwards? Will the economy continue its slow growth forward or will the health care reform stymie our progress? As a community pharmacy owner I wonder if pharmacy is on the verge of a bubble going bust or boom? I propose, with appropriate changes from a community pharmacy perspective, that the pharmacy workforce can save itself from going bust.

One of the great tools independent pharmacy owners utilize is the National Community Pharmacists Association (NCPA) Digest. The 2010 NCPA Digest (which reflects 2009 data) laid out the most recent trends among independent pharmacies. Over 90 percent of independent pharmacy revenues come from prescription sales with over 90 percent of those sales being processed through insurance companies. The resulting math has produced over the past decade, a stagnant 22 to 24 percent profit margin. With ever increasing expenses, such fixed profit margins leave businesses with little room for expanding salaries and/or positions. Owners are trying to figure how to answer this issue by looking at increasing their revenues through improving over-the-counter (OTC) sales, cutting operating cost, increasing prescription volumes, and promoting alternative pharmacy services, to name a few. Since the economy has not supported increases of much of anything, the only place left to turn is to cut cost. As a result, the need to cut cost has left owners to turn to their largest expense after inventory which is salaries. With pharmacists commanding high salaries, their jobs and hours are first to get cut. Even auxiliary staff and technicians are at risk.

So have pharmacists' salaries and/or the number of pharmacists available in the workforce peaked? I would say by the request to write this article there is some growing unease, not to mention feedback from several pharmacy students and other pharmacists expressing concern about trying to find a job. However, research done on this issue would suggest that pharmacist salaries are still high (and not decreasing) and the unemployment rate for pharmacists is well below other healthcare professionals. So while the market numbers support a strong pharmacist workforce, there is definitely enough buzz going around generating some apprehension.

One way owners are trying to be proactive in preventing a pharmacy bubble burst is by focusing on cutting cost by looking at alternative solutions to the current business model. I believe three big areas that are on the way into community pharmacy are tech-check-tech / associate technician programs, prescription ATM kiosks, and central filling alternatives. As an owner, if any three of these were allowed I would turn to them immediately as it would help me cut cost while maintaining, and possibly increasing, current prescription volumes. I believe it is a matter of time before North Carolina regulations start to reflect such changing desires. Once the changes occur there is no going back (e.g. RedBox kiosks and Blockbuster).

So where do pharmacists turn to find new jobs in a growing pool of well-qualified pharmacists? Well I would say, "If you are not in the ownership business then you better get in the clinical business." In the clinical business, pharmacists need to learn how to justify and market their salaries. Two key areas that pharmacists should focus on are increasing revenues by either decreasing costs or increasing sales for their employers. Several places where clinical activities by pharmacists in the community can provide decreases in employer health care costs are collaborative practices with other prescribers, institutions, and health initiatives. Areas that can help increase sales include compounding, immunizations, durable medical equipment services, medication therapy management (MTM) consultations, and several others. Staffing is on the way out in community pharmacy and community pharmacists will have to turn from dispensing activities towards these alternative services.

Other positive trends that may help create more clinical activities include the following. Starting at the State level there is an initiative focusing on allowing pharmacists to immunize a larger population with a larger number of vaccines (e.g. State Senate Bill #246 and House Bill #444). At the Federal level there is growing momentum on the expansion of Medication Therapy Management (MTM) services (e.g. Federal Senate Bill #274 and House Bill #891). The passage of the Affordable Care Act stipulates that insurance companies have to spend 80 to 85 percent of patients' premiums on patient care and quality improvement, which leaves the possibility of expanded pharmacy opportunities. Finally, the growing dedication from independent and chain pharmacies towards clinical services is spurring a new generation of clinical community pharmacists.

As an owner, I see that the applicant pool is better and bigger than ever for new and currently practicing pharmacists. But

large salaries are now in demand, and without the profit to absorb them, the market may not correct itself anytime soon. We must help each other change the direction of community pharmacy to save itself from its own pharmacy bubble. What will you put your efforts into as a pharmacist?

Still a good time to be in long-term care

By Thomas D'Andrea, RPh, MBA
Vice President of Pharmacy Services
Neil Medical Group

"One day soon pharmacists will be making over $30,000 a year." That is what my pharmacy supervisor told me in 1978 when I was first hired for $21,000 a year. I took the job with a chain pharmacy because it outweighed the offer I received from an independent pharmacy for $15,000 a year. The fledgling chain pharmacies were growing in the late 70's; jobs were plentiful and opportunities abounded.

Though the times were financially rewarding, the hours worked by many of us were long. Besides working a 40 hour shift, we often covered weekends for other pharmacists. When your partner went on vacation, there was no one else to cover the shift but yourself. During the birth of one of my children, I called from the delivery room trying to arrange for someone to cover my shift that day since I had no partner at the time.

Today, pharmacists start out making over $100,000 a year. I do not hear the same talk that I heard in 1978, that soon pharmacists will make over 40 percent more in the near future. I do not see pharmacists consistently getting the opportunity to work more hours than their regular shift. What I do see is that pharmacy job growth is stagnant and practicing pharmacists are staying put.

According to the Bureau of Labor Statistics, United States Department of Labor, (Occupational Outlook Handbook, 2010-11 Edition), employment of pharmacists is expected to grow by 17 percent between 2008 and 2018, which is faster than the average expected growth for all occupations. If one looked at the reasons for this optimistic statement, it would be hard to be contrarian. The increased numbers of elderly who use many prescription medications, pharmacists moving more and more into patient care, pharmacists who elect to work part time, and retiring pharmacists all are factors that predispose a need for an increase in the number of pharmacists.

The current new pool of pharmacists is well educated and has developed a skill set to address the issues in medication therapy. These pharmacists' clinical skills are exceptional, but finding a place to utilize their talents is not easy. The long-term care discipline of pharmacy broadens the range of traditional pharmacy services. Consultant pharmacists in long-term care are pharmacists with the motivation to use their clinical knowledge to take care of residents in all institutional settings. Consultants must be flexible in their work schedules and be willing to travel to various facility locations.

Currently, our long-term care pharmacy employs over 50 pharmacists, including pharmacists who dispense and pharmacists who consult. In the last year, we have hired no new dispensing pharmacists and hired only one replacement consultant pharmacist, even though we have grown in the number of residents we service. Let me offer an explanation of our stability and lack of job growth. First, our company values the contributions of our pharmacists who are taking care of our residents and making the business successful. Many of the pharmacists who work here have been employed with the company for five years or more, some for over 20 years. Second, employees are not looking for other jobs. They enjoy the long-term care setting, as consultants who enjoy the interaction with nursing staff and residents, or as dispensing pharmacists who enjoy the interaction with other clinical pharmacists at the practice site. Third, some pharmacists who were part-time have increased their hours to full-time status. With the economic downturn, pharmacists have taken advantage of all the hours they can work in order to be prepared if the economy continues as it is. Finally, there are not many jobs in the workplace that can replace what is already theirs. Pharmacists who have been in practice for some years know that financial benefit is only one aspect to a successful career. In the long-term care setting, a pharmacist makes a unique, daily contribution to the well-being of each resident served. There is great satisfaction in being an integral partner with a long-term care facility.

Jobs in long-term care pharmacy will continue to grow but not as robustly as the U.S. Department of Labor predicts. There is a lot of labor capacity in the workforce currently, as more part-time pharmacists are choosing to increase their working hours. Pharmacists in long-term care are working longer due to better health, and working in a practice setting that is not as physically demanding as retail. Future compensation will slow in terms of salary as pharmacy progresses towards saturation in the labor force. It is still a good time to be a pharmacist, but "the times they are a-changin'."

Labor pains in the pharmacy market

By W. Mark Moore, PharmD, MBA, MS, RPh
Associate Dean of Student Affairs & Admissions
Campbell University College of Pharmacy & Health Sciences

Bubbles do burst and markets do correct. An economic downturn coupled with uncertainties generated by the passage of complicated legislation aimed at healthcare reform has caused a ripple of effects impacting our state and nation. In the past, health care jobs have been considered "recession proof" by some and many individuals felt comfortable, if not safe, by choosing a career in the health professions. This notion has been largely supported across time as economic dips have been isolated to other sectors of the economy. However, this economic recession has had drastic effects on multiple sectors. Additionally, the very foundation of healthcare has been centered in the cross hairs of the political machine.

Pharmacy and other health professions are being impacted by the aforementioned. Notably, a decade of a labor shortage in pharmacy has evaporated nearly as quickly as retirement funds across the country. As the financial and housing sectors experienced correction, retirement parties for many pharmacists were rescheduled for a later date. In addition, existing pharmacy schools increased class sizes to aid the underserved market and a burst of new schools entered the marketplace.

North Carolina has great health profes-

sions schools and training opportunities. The pharmacy schools have good relationships and work together on many initiatives (preceptor training, student leadership development conferences, pharmacy practice-based research, etc.). These relationships aid in all student pharmacists receiving a great education. We have to embrace change and work together to advance the profession. We must continue to challenge each other to improve the quality of what we do and continue to collaborate to provide our students, preceptors and patients the best.

The pharmacy schools must be attentive to the market. We must respond by not only delivering graduates who can make an immediate impact upon entering the market, but also prepare them with the tools (clinical, leadership, critical thinking) for a 30 to 40-year career. Schools cannot afford to build a product that does not meet the demands of the consumers or one becomes obsolete as fast as a computer. In addition, all stakeholders (professors, pharmacists, students, etc.) must possess a positive attitude embracing change, adaptability, and accountability.

Pharmacy graduates seem to be gaining employment at a slower pace than in recent years. In fact, it was not long ago that some graduates were receiving remarkable sign-on bonuses such as automobiles, cash, loan repayment programs, etc. The bonus today seems to be securing employment with a well-paying position, whether or not it is in the city or region one desires is a different story. Many graduates seem to be seeking post-graduate training experiences rather than transitioning directly into the labor market. Graduates completing these programs should be developing and honing a skill set that will be recognized by, and attractive to, the employers and more importantly, the patients. However, the number of post-graduate training programs is not expanding at the rate the new graduates are pursuing these opportunities.

Anecdotally, Campbell graduates in 2010 felt it took longer to gain employment than their peers in 2009. Approximately one quarter of the class of 2010 went on to residency training. The majority of the class seeking full-time employment chose jobs in community pharmacy. Health system pharmacy was the next most popular area of practice for these graduates, followed by long-term care, government and other areas of practice. The Class of 2011 survey is currently underway. With almost half the class responding to date, approximately 70% have secured employment. Nearly 20% of the class of 2011 will be performing post-graduate training. Early data indicate that salaries are holding steady with a range of $100,000-$120,000, with a few graduates reporting starting salaries greater than $120,000.

The crystal ball is hazy, as nobody seems comfortable predicting how the labor demand will align with the labor supply. Many factors are changing in government and the healthcare environment. Prescription demand and reimbursements may drastically be affected. Demand for higher level clinical services may change, but those services may continue to require additional training and certifications. In addition, retirements may play an important role as time progresses. I believe well educated and trained pharmacists will find employment; the location of the opportunities may not coincide with where some may want to reside.

In a very recent conversation with a health system executive, I was told that signs of improvement were visible and the organization was preparing for the future by adding pharmacy services. In fact, the organization has several vacancies to hire. Employers have expressed they are carefully evaluating applicants' attitudes, enthusiasm, flexibility, adaptability and interpersonal skills to better ensure they make the best hire.

It is an exciting and challenging time to be in practice as the role of the pharmacist is transforming, the healthcare system is changing, and reimbursement models are being restructured. It is imperative that pharmacists embrace the challenge and approach it as solution-oriented problem solvers. Pharmacists must come to the table and demonstrate value to employers, the healthcare system, and most importantly, to patients.

New grads remaining optimistic

By Julie Kennerly, PharmD
2011 Graduate, UNC Eshelman SOP

As this academic year draws to a close, I, along with other incoming new practitioners, are constantly being asked, "What are your plans for next year?" If I were to survey my classmates their responses would include a wide variety of answers including residency, community hospital positions, independent and chain pharmacy positions, and fellowship appointments. While these answers are likely similar to responses in previous years, it is clear that there has been an increase in students whose response is, "I do not know."

The current job market is completely different from the picture that was painted for us some time ago when we committed to spend four years earning our Doctorate of Pharmacy degrees. I can vividly remember discussions with new practitioners when making the decision to apply to pharmacy school. They all described a similar job market filled with numerous employment offers, hefty sign-on bonuses, and an ability to negotiate schedule and benefits. Each of these perks can be contributed to the large shortage of pharmacists that was evident just a few years ago. With increasing class sizes, the addition of satellite campuses, and a new school of pharmacy scheduled to open at High Point University in 2013, I believe it is safe to say that we are quickly moving towards the opposite end of the spectrum.

As the profession of pharmacy in North Carolina transitions to a surplus of pharmacists, the decisions that I expected to be faced with as a new practitioner have also evolved. It is astounding how quickly my outlook of the future of the profession and of my role within that future has changed. I know that I am not alone in this uncertainty, but it is clear that the days of being handed a diploma along with a six-figure salary and guaranteed job security are no longer a reality. This provides new challenges for professionals at all levels of experience, but particularly for new practitioners. With the struggling economy, and increasingly competitive marketplace we must find ways to distinguish ourselves from our new colleagues who have many years more experience than we will be equipped with upon entering the job market.

In order to ensure our own job security, it now becomes our responsibility to make ourselves indispensible to our new employers. A common choice for new practitioners to aid in accomplishing this is the pursuit of advanced training through a residency or fellowship program. While this is a great way to distinguish oneself,

there are numerous other ways to advance one's skills and professional attributes. New practitioners can consider learning or improving upon their Spanish speaking skills, establishing new patient care services such as Medication Therapy Management, becoming a Board Certified Pharmaceutical Specialist, or by acquiring their Certified Diabetes Educator credential. While the ways in which we can advance our professional standing are limitless, it is clear that we must move away from the traditional dispensing role and embrace a more service and knowledge-based practice model.

Despite the likely surplus of pharmacists that will occur in North Carolina with rapid expansion and development of pharmacy schools, I believe the future is bright for new practitioners. We are being trained at a level that exceeds that of our more experienced colleagues and there is ample opportunity to utilize and expand upon this training to distinguish ourselves and to become indispensible to our employers. While the job market is definitely more competitive than in previous years, we must seize this opportunity to focus on our personal professional development while providing the patient centered care that we are well prepared to provide.

Best of luck to the Class of 2011!

Adapting to change amid the new workforce reality

By Marc F. Cochran, CSP
Partner, Metrix Healthcare Group

It's no secret that the pharmacy workforce in North Carolina has undergone a significant change over the last few years. Fewer jobs, more competition, and the accelerated adoption of technology have all played a part. In addition, the race to put a drug store on every corner (a stimulant for the jobs of previous years) has seemed to slow down due in large part to a slower economy. Moving forward, here are predictions on what to expect and ways to adapt.

In hospitals, the need will be for more specialization in the pharmacy. Whether this is for inpatient or outpatient, there is still demand for pharmacists who have a unique set of skills. Areas like oncology, pediatrics, and cardiology still represent a recruiting challenge for most organizations with no clear solution in sight. Also, pharmacists with a specialized expertise in technology will find more opportunities than before.

Something to note as an outlier are smaller, rural hospitals. These hospitals have probably seen the most benefits from the economic impact of increased competition in pharmacy. As opportunities dried up in larger cities, it drove people to go where the opportunities were, which might have required a longer commute to a smaller facility. Look for some turnover to occur at these hospitals as the economy gets better and jobs reopen. Retention efforts now will be key to keep staff in place.

Also, the focus of many organizations will be on leadership. With much of the pharmacy leadership now in the hands of the Baby Boomers, retirement will begin to drive the need for new directors and supervisors. The hospital administration's need to properly succession plan and prepare future leaders to assume these roles will be paramount. Each organization must assess their team regularly, identify the high performers, and nurture them with training to be ready when the time comes. Hospitals are not immune to talent planning and should incorporate it

Pharmacist Salary Survey Results

NCAP recently sent a salary survey to all North Carolina pharmacists, with 1,574 responding. Below are highlights of the survey compared to the results of a nationwide survey conducted by *Drug Topics* in March 2011. Complete results of the NCAP survey can be found at www.ncpharmacists.org.

North Carolina Demographics: 55.6% female, 44.4% male. 15.5% are under the age of 30, 25.9% are age 30 to 40, 22.7% are age 40 to 50, 24.6% are age 50 to 60, and 11.4% are over the age of 60.

Practice Setting

North Carolina		Nationwide	
Chain	38%	Chain	30%
Hospital	29.2%	Hospital	19%
Community Independent	14.2%	Independent	17%

Job Title

North Carolina		Nationwide	
Staff Pharmacist	45%	Staff Pharmacist	47%
Pharmacist in Charge/Manager	16%	Pharmacist in Charge/Manager	20%
Clinical Pharmacist/Specialist	12%	Clinical Pharmacist/Specialist	8%

Salaries

North Carolina		Nationwide	
$ 100,000-110,000	19.7%	$ < 104,000	31%
$ 110,000-120,000	19.1%	$ 104,000-140,000	72%
$ 120,000-130,000	16.6%	$ > 140,000	7%

Hourly Pay

North Carolina		Nationwide	
$ < 50/hour	16.1%	$ < 50/hour	17%
$ 50-60/hour	48.7%	$ 51-60/hour	65%
$ 60-65/hour	23.7%	$ > 61/hour	18%
$ > 65/hour	11.5%		

Benefits

North Carolina		Nationwide	
Paid Holidays	77.8%	Paid Holidays	87%
Paid Vacation	92%	Paid Vacation	87%
Paid Sick Days	72.5%	Paid Sick Days	67%
Health Insurance	83.8%	Health Insurance	84%
Dental Insurance	69.4%	Dental Insurance	75%
Vision Insurance	53.6%	Vision Insurance	59%
Life Insurance	64.5%	Life Insurance	69%
401K	76.6%	401K	71%

regularly into their three, five and ten year plans as soon as possible.

Overall, the biggest threat to the pharmacy workforce is technology. Automation and other technologies in pharmacy stand to make the biggest impact over the next decade. Replacing a human component of a process with a machine is a tough, but inevitable, move in many industries, including healthcare. As implementation expands, it will create more patient-facing opportunities that pharmacists have long craved. But, in turn, there will be fewer pharmacists needed to satisfy this role in the hospitals.

The same impact could be felt in retail. There are some states where retailers have implemented a central fill process, most notably Florida. Gaining efficiencies in one area, they have decreased the need for pharmacists in the storefront. The biggest benefit of technology in retail is value to the organization and reduced overhead cost, so it is up each pharmacist to determine what their on-going value will be to the patient.

Pharmacists should seek out new opportunities to create long-term relationships with patients earlier in the process, as many do with MTM services. There are now more individuals embedded in physicians' practices that are making an impact and seeing the benefits of earlier pharmacist involvement in their case management. Look for this to expand, and for more pressure to be put on reimbursement to recognize this as a valuable clinical service.

Technology will not replace the pharmacist completely, but look for it to make a significant change on how healthcare does business. Also, keep in mind the cost for a personal computer over the last 20 years is far less than it used to be. The same will be true about pharmacy technology, it will become more affordable and be implemented in more areas.

With increased competition for job openings, especially in the metro areas, it will be how a pharmacist stands out and what they have accomplished that will benefit them most. This is the first time in a long time where there is this much competition among applicants in pharmacy. The number of scripts filled a day and always being flexible are more a given now than anything unique. Most organizations want to see projects that a candidate has taken on, their leadership abilities, and overall, what type of an impact a candidate has made throughout their career. Being able to sell that to a recruiter or hiring manager is going to be a new skill that must be learned in order to have the best chance to be hired. These are the things that will make people stand out.

Impressions from a hospital pharmacy director

By Ellen Williams, MBA, RPh
Pharmacy Director
Mission Hospital

According to the Bureau of Labor Statistics (BLS), pharmacist employment will grow 17% between 2008 and 2018 (http://www.bls.gov/oco/ocos079.htm#outlook). The major concentration of jobs will be in metropolitan areas. Regardless of these statistics, some new graduates are expressing more anxiety about finding a job than in the past. This anxiety can be attributed to many reasons, which when considered as a whole, seem to describe the "perfect storm" for new job applicants. Regardless of BLS statistics, jobs will not increase uniformly in all areas, which to new graduates, feels like a deficit of pharmacist positions in **some** areas. For example, in some areas retail chain stores are contracting and reducing hours (particularly rural areas) and in other areas, new stores are being built. Adding to the anxiety is the fact that more pharmacy students are considering residencies and residency positions are scarce in relation to demand. Decreased turnover and some contraction in hospital staffs due to anticipated decreased reimbursement and hospital buy-outs have added to the sense that the demand for hospital pharmacists has decreased. Because of the economy, some pharmacists near retirement are not retiring, and some pharmacists are returning to work after having retired.

New pharmacy graduates have increased in the last few years. In the southeast, from 2001 through 2009, pharmacy school graduates have almost doubled from the expansion of pharmacy schools. Pharmacy job contraction, lower turnover rates because of the economy, coupled with the increase in the supply of pharmacist graduates from pharmacy school expansions, heightens the anxiety.

Of note, the American Society of Health-System Pharmacists (ASHP) accredited residency programs are in expansion phases to try to help meet the residency demand.

Hospitals will need pharmacist expertise to meet the CMS core measures, decrease re-admissions, and to help meet anti-coagulation goals and other quality measures. Managers and directors need to respond to this demand quickly at the risk of other mid-levels taking on this role. To meet this role, clinical pharmacy specialists are needed.

Since 2006, Mission Hospital's inpatient pharmacist turnover rate has varied from 7.1% in 2006 to a high of 9.8% in 2008 to a lower 4.8% in 2010. The total number of pharmacist vacancies during this time has been 14 (about 18% of total inpatient staff). One explanation of the reduced turnover rate over the last two years is that the economy and the decreased hospital reimbursement horizon present uncertainty to staff who are contemplating a change. The uncertainty is magnified when considering a move to an unknown hospital environment and unknown housing market from a known hospital and housing market, regardless of how unfavorable the known is.

Mission's specific pharmacist need over the last few years has been for clinical specialists, IT pharmacists, and managers. This need is based on the increasing role that pharmacists have to play in achieving CMS core measures, anti-coagulation goals and other medication related quality and cost initiatives. Recently, the supply of interested pharmacist candidates for our hospital positions have been mostly retail pharmacists wanting to make a change, pharmacists who have experienced down sizing, and new pharmacy residents. The most successful pharmacist recruitment process that we have used to meet our needs has been ASHPs Personnel Placement Services (PPS), which has connected us with highly trained pharmacy residents. Since Asheville is included on several "best places to live" lists, Mission Hospital does attract some pharmacists based on Asheville as being a destination for quality living. For the last three years, Mission Hospital has had 10 applications for each pharmacist position compared to 5 or 6 applications per position for the preceding three years. The number of applications is an improvement, but the majority of the applicants do not have the clinical experience to meet our needs. In comparison,

there are 23 nursing applications for each nursing position. Clearly, a pharmacist surplus is not being experienced at Mission Hospital. Neither is a pharmacist scarcity, as in pervious years, being felt.

Mission Hospital will be in need of more clinical pharmacy specialists and perhaps Clinical Pharmacist Practitioners in the next few years to help the hospital meet accountable care organization requirements, quality care initiatives, and teaching requirements of the new UNC Eshelman School of Pharmacy campus. The number of pharmacists needed will be somewhat off-set by efficiencies gained through imaging technology, connectivity initiatives, automation, increased technician responsibilities, and robotics. With the increase in technology, the need for IT pharmacists will increase. What is needed is a good staffing standard for hospital pharmacies, but implementing one is difficult because of unique hospital pharmacy services and medical staff cultures. In addition, during times of technology transitions, it is hard to benchmark when looking at "snapshots" of productivity. The off-set of pharmacist needs for hospital pharmacy, due to technology implementations, will, unfortunately, be defined in retrospect.

Tips for student pharmacists

By Carolyn Ford, PharmD
Professor and Assistant Dean of Students
Wingate University School of Pharmacy

Over the past two years, graduates of Wingate University School of Pharmacy have experienced greater challenges in acquiring pharmacist positions in desired metropolitan locations such as Charlotte and its surrounding regions. This appears to be the trend throughout North Carolina as an increasing number of graduates and pharmacists alike must seriously consider positions in non-metropolitan, rural regions across the state. It has been reported that some graduates from North Carolina pharmacy schools have encountered employment difficulties even in the rural markets and have been unemployed for extended periods of time after graduation. It is important to note that this downward trend in employment has also been echoed by most academic colleagues and programs around the nation.

The causes of this dynamic shift in the pharmacist job market are believed to be multi-faceted. For several years, manpower studies reported a shortage of pharmacists. In response to this shortage, many existing pharmacy schools increased their enrollment by increasing class sizes and establishing satellite or distant campuses. In addition, establishment of new pharmacy schools has increased annually since 2003. The number of programs increased from 83 in 2004 to 124 accredited programs in 2011. Additional new programs are in the pipeline awaiting accreditation and a new program is slated to open in the Piedmont Triad region of North Carolina in 2014. Despite uncertainty in pharmacist employment currently being experienced nationwide, existing programs continue with plans to expand class sizes while universities move forward with plans to establish new schools.

Other causative factors believed to be influencing the pharmacist job market are directly related to the economic downturn in the country. The manpower studies prediction that many eligible pharmacists will retire has been blunted by many of them remaining in the workforce to re-capture lost retirement funds or enhance retirement resources for projected shortfalls due to a rising cost of living. The struggling economy is also believed to have blunted the predicted increase in prescription volume associated with an increased number of pharmacist jobs. The lack of health insurance by most unemployed Americans is believed to have negatively impacted the projected increase in prescription volume.

The current stagnant pharmacist job market and increasing number of pharmacy graduates presents a challenging combination for student pharmacists and pharmacists in general. Few solutions are being offered to address this perceived problem. The following tips provide guidelines on how student pharmacists can better position themselves for future employment in a competitive market. Many of these tips are also applicable to pharmacists seeking to change positions or employers.

Tips for Student Pharmacists in a Competitive Job Market

1. Take full advantage of the education being offered by your program to acquire the knowledge and skills necessary to become a highly competent pharmacist. Ensure that the pharmacy program you are attending is providing a high quality education that includes the appropriate number of experienced faculty and quality experiential sites and preceptors.
2. Enhance your professionalism portfolio. Exhibit the appropriate attitude, appearance, written and oral communication skills including electronic interactions, interpersonal interactions, and others. You want to have a reputation of being professional in all encounters including with your peers.
3. Develop positive relationships with peers, faculty/preceptors, and potential employees. Peers may have opportunities to influence future employers about you. Faculty/preceptors will have influence with potential employers and they will be needed to provide positive references or recommendations to future employers.
4. Build solid, meaningful relationships with desired employers. Seek paid and unpaid internships to gain experience and exposure. Volunteer at the desired pharmacy/site if intern or employment opportunities are not available. Participate in health-related activities that are being sponsored by the desired employer.
5. Develop attributes valued by employers. Examples include being reliable by reporting to work on time and as scheduled; having a positive and professional attitude and reputation; being a productive asset to the job rather than a slacker or dead weight; being a problem-solver as opposed to a problem-creator; taking initiative to get things done without waiting to be told what to do; being creative and prepared to enhance the job; being open-minded and exhibiting a "can-do" instead of a "won't do" attitude.
6. Become self-employed. Own an independent community pharmacy or establish a consultant pharmacist practice. Develop new opportunities such as establishing a pharmacy practice in a physician's office or provide medication management services to a contracted group of patients. Once health care reform is established, many new non-traditional opportunities will become available in pharmacy. Position yourself to establish some of these new health care roles for pharmacists that will result in new job opportunities.

A surplus of highly qualified candidates

By Jane A. Younts, RPh, MBA, MHA
Director of Pharmacy
Morehead Memorial Hospital

The decline in the US economy over the last three years has had a definite effect on healthcare and pharmacy. While the increasing unemployment rate has not been as significant for those working in healthcare as it has in other sectors of the market, job growth in healthcare and pharmacy has declined. For most of my career, new pharmacy graduates had many jobs to choose from which is not the case today. The number of vacant positions in hospitals has decreased dramatically. This is effecting pharmacists' salaries and is of concern since our state is graduating more pharmacists, and several colleges and universities are opening new schools of pharmacy in the state.

Morehead Memorial Hospital is a small community hospital employing nine full-time pharmacists. Prior to 2008 it took an average of 12-18 months to fill a vacant position and always required the help (and expense) of recruiters. We have not had an opening since November 2009 and while I did use a recruiter, the position was filled in approximately four months. When filling a position today, there are more candidates to choose from and there are more highly qualified candidates looking for jobs. I recently spoke with a local recruiter who said she has approximately 16 applicants for every job opening. New graduates are having a difficult time finding jobs. Residency trained pharmacists are willing to take staff jobs in rural hospitals. Some hospitals and retail pharmacies are doing away with overnight coverage. Experienced pharmacists are not able to change jobs as easily as they once did. Not only are there fewer jobs, but selling a home to be able to move to a new job is increasingly difficult.

For many years, pharmacists saw their salaries increase almost annually due to market adjustments in addition to annual merit increases. As a director, I found it was a constant battle to stay competitive with the market. I think the days of market adjustments are over as salaries are directly related to supply and demand. Demand has decreased and supply has increased. Salaries, therefore, will probably not change much in the next few years. Most pharmacists in the state have seen their salaries stay the same or perhaps they have received a slight increase over the last two to three years. Unfortunately, some have seen their salaries or hours decrease. Even when the economy improves, I am not sure how much growth we will see in salaries as the demand may not keep pace with the increasing supply.

I don't think the future of pharmacy is bleak in North Carolina but it probably will not look like it did five to ten years ago. I think we will continue to see changes in supply and demand, salaries, and perhaps what roles pharmacists fill. As the economy improves and unemployment decreases, the demand for pharmacists will probably increase. North Carolina will continue to have an aging population who will take more medications and require the expertise of pharmacists. Technology will continue to change how we practice pharmacy and will require more tech savvy pharmacists to implement and maintain computer systems. The implementation of CPOE will change the demands of pharmacists as we can use technology to help our physicians practice evidenced based medicine. Healthcare reform will also play a role in the future demand for pharmacists and will play a role in determining future salaries. Over the next few years we will see the implementation of health care reform. We will see what role pharmacy will play in accountable care organizations and patient-centered medical homes. There will always be a need for pharmacists in our healthcare system but we must always be ready to adapt to the changes and needs of the system.

Mail order creates obstacles

By Jennifer Burch, PharmD, CDE, CPP
Pharmacist/Owner
Central Pharmacy & Central Compounding Centers of Durham

I am a community pharmacist in Durham and manage operations at one traditional and two compounding pharmacies. I have been a pharmacist for 18 years and have seen the practice change over that time. I see the challenges before us as an opportunity to mold what pharmacy practice can be. However, to make these changes in practice all aspects of pharmacy must come together.

One of the biggest challenges I am facing at my community pharmacy is mail order. We are losing our patient base that we have served for many years because their employers are forcing them to purchase their prescriptions from mail order pharmacies. This is not an issue facing just independent community pharmacies, it affects chain community pharmacies the same way.

During the coming years, I see mail order challenges as an obstacle for a significant amount of growth in community pharmacies unless there are some changes in the practice model. Sure, prescriptions can move from one pharmacy to another but until community pharmacies/pharmacists become part of the patient's medical home where we work with other local health care providers to get the best outcomes for patients, mail order will be cheaper. With the decline of prescriptions filled locally, there is a decline in the number of pharmacies and pharmacists needed despite the growing Baby Boomer population. This shift is unfortunate since we are graduating more pharmacists than ever. As a manager, we are trying to bring in new customers and create new services in order to maintain our current staffing. Growing the practice and hiring new pharmacists is every manager's goal.

The current applicant pool seems to be strong although I have not advertised for a pharmacist in a long time. In addition, the new graduates today are well prepared but unfortunately, the number of pharmacists has grown faster than the demand. PharmD candidates today are having a much more difficult time finding jobs or residencies over the last few years. Pharmacy schools continue to expand the number of graduating pharmacists without a profitable, widely replicable model for expanding the role for pharmacists. Examples of expanded roles include medication therapy management (MTM) programs, immunization programs, diabetes education programs, weight loss programs, self-care of patients with nonprescription products, and the provision of specialty pharmacy services such as compounding. Obviously, these programs must generate enough revenue to pay for the pharmacist

to run those services. We as a profession have repeatedly demonstrated that pharmacists working with patients can improve a patient's control over a chronic disease such as diabetes. We, however, have been ineffective overall at delivering the message to the payors.

As far as salaries, I have not seen erosion of those numbers presently. One can only anticipate the decline in salaries especially with saturation of pharmacists in the job market. I remember how pharmacists' salaries grew dramatically when there was a shortage of pharmacists in the late 1990s. I expect to see the reverse happening within the next couple of years.

How do we move toward the vision we have all been preaching about for the last 10 years? The model where most pharmacies provide expanded clinical services? This takes the current practicing pharmacists and the schools of pharmacy moving this vision forward. We worked in North Carolina on this model for years. We are a very progressive state as far as pharmacy practice. We have trained a huge number of pharmacists to provide immunizations over the last few years. We need to do the same thing with other common disease states such as diabetes.

Pharmacists have the opportunity to step up to the plate and help provide pharmacy services that may be able to relieve the burden of the primary care provider shortage. We have to have the passion as a group and the voice as a group to move the profession forward.

Preparing students to work in rural areas

By Wendy Cox, PharmD
Assistant Dean for Professional Education
UNC Eshelman School of Pharmacy

As a pharmacist and someone who works with pharmacy students searching for positions, I've witnessed a change and evolution in the pharmacy workforce. Ten years ago there was a shortage of pharmacists and graduates could expect large sign-on bonuses and their choice of practice. Today there is no longer a shortage in popular metropolitan areas and the sign-on bonuses and choice of location have disappeared.

Several factors have contributed to this change in climate including the downward turn in the economy, advances in technology, and significant increases in the number of pharmacy schools across the nation. Some changes, such as the economy, are not permanent. Others are here to stay.

The career data for the 2011 graduating class of the UNC Eshelman School of Pharmacy have not yet been collected, but in 2010, the majority of graduates accepted a position in community pharmacy (39 percent) or a residency or fellowship (31 percent), with 74 percent staying in North Carolina to practice. Based on student feedback this year, the number of students interested in residencies has increased over the past few years. This interest is likely due to more information and promotion of residencies, graduates' desires to train for advanced practice positions, and the decreased availability of jobs in graduates' choice of locations.

Positions are still available throughout the state. However, many are located in more rural areas and fewer exist in the state's urban centers. Pharmacy graduates expecting to choose from multiple opportunities in larger cities will have to adjust their expectations.

More graduates seeking residencies can have a positive effect on health care as residency training means pharmacists will be more experienced when entering their first permanent position. Hopefully, these pharmacists can work to further broaden the scope of pharmacy practice in North Carolina. With the greater availability of positions in the rural areas of the state, new pharmacists will spread into more underserved areas, which will be a great benefit for citizens whose access to health care is limited.

The UNC Eshelman School of Pharmacy has established a satellite campus in Asheville and plans to enroll 20 students in the fall of 2011. This satellite campus is designed to mitigate the shortage of pharmacists in western North Carolina by training and retaining pharmacists in that area. Additionally, the School is exploring a rural-health initiative for the curriculum. This program will appeal to students who are interested in practicing in rural communities with a curriculum focused on rural-health topics. With these changes, the hope is that our graduates will be more prepared to work in rural areas. ❖

Online Offerings: Pharmacist Refresher Course & QA/Law

NCAP has partnered with the Connecticut Pharmacy Association to offer The Pharmacist Refresher Course, an online course designed for pharmacists who wish to return to community pharmacy practice after an absence from practice for three or more years. The course consists of three modules, all of which have been approved for ACPE credits. The first two modules are online and composed of weekly study segments that allow course participants to work at their own pace, on their own time. The third module consists of a three-week, 90-hour live experience in a community pharmacy. Only those who participate in all three modules will earn a Pharmacist Refresher Course Certificate from Charter Oak State College. Those taking modules One and/or Two for personal enrichment will earn ACPE credits through CPA. This course will give home study law credit to any pharmacist wanting to learn about quality assurance strategies and North Carolina's pharmacy laws.The QA/Law Course can be used to prepare for reciprocity into North Carolina, or for those who want an update on Pharmacy Law and Quality Assurance. Students must follow a two-week course schedule. Online discussion boards and instructor monitoring and interaction keep you on track throughout the course. The course is offered the first two full weeks of every month. This course is accredited by ACPE for 15 hours of home study law education. For more information visit www.ncpharmacists.org.

The Importance of Communication

By Alexander T. Jenkins, PharmD, MS
Medication Safety Officer
Department of Pharmacy
WakeMed Health & Hospitals

In today's healthcare system, one that is heavily dependent on timely and accurate information exchange, effective communication is a foundation for medication safety. Because critical information must often pass between multiple healthcare practitioners of varying clinical backgrounds prior to being relayed to the patient, strong communication and teamwork are necessary to provide a framework for ensuring that the right people have the right information, especially in regards to safe medication use. When communication is lacking there is an increased risk of medication errors, and patient safety may be compromised as a result.

Evidence has demonstrated that communication failures continue to be a major cause of medical errors, especially those related to medications. According to the Joint Commission, communication failures have been a leading root cause for medication-related sentinel events since 1995.[1,2] Overall, it is estimated that there are at least 1.5 million preventable adverse drug events (ADEs) every year in the United States, but the true number may be much higher.[3] Another estimate projected that the annual cost to the healthcare system from preventable ADEs that occur in the hospital alone is approximately $3.5 billion.[3] These statistics are staggering, and emphasize the need for a paradigm shift in the health care model to one that is centered around communication and collaborative teamwork. Effective communication between healthcare professionals and engaging patients in the treatment plan can help to reduce medication errors in the future.

The need for more effective communication in the healthcare system presents a great opportunity for pharmacists to take a leading role in reducing medication errors by facilitating improved information flow among healthcare professionals. Information pertaining to medication management must be accurately passed off so that the patient is ultimately given the right information in order to ensure safe medication use. As critical members of the interdisciplinary healthcare team and as the medication experts, pharmacists can help reduce medication-related hand-off errors that occur both within healthcare organizations and during transitions of care (e.g., hospital to outpatient, outpatient to nursing home, etc.). In addition to reducing errors, effective communication can also lead to other positive outcomes such as more effective interventions, improved safety, increased patient satisfaction, and improved quality of care.[4-7]

Moreover, effective communication between pharmacists and patients has been shown to reduce errors of medication misuse and improve medication adherence. A survey cited by the National Council on Patient Information and Education (NCPIE) revealed that as many as 49% of patients forget to take a prescribed medication, 29% discontinue medications early, and 24% take less medication than prescribed.[9] By increasing involvement in counseling and medication therapy management, pharmacists have been shown to increase adherence by as much as 46%. These figures highlight the importance in empowering pharmacists to take the time to communicate with patients and become more involved with their care.

Strong communication between pharmacists and other healthcare professionals that ultimately extends to the patient helps to maintain continuity of care and promote collaboration on a treatment plan. By fostering a higher degree of consistency in medication management, pharmacists can lead the multidisciplinary effort to improve medication safety by reducing the rate of preventable ADEs.

Potential Communication Barriers

Improving communication within today's healthcare system can be a challenge due to inherent barriers that are common to all healthcare organizations and settings. The following list indicates some of the common communication barriers cited by healthcare professionals across the nation.[10]

- Personal values and expectations
- Tendency to work autonomously
- Personality differences
- Hierarchy
- Culture and ethnicity
- Generational differences
- Gender
- Historical interprofessional rivalries
- Language differences
- Varying levels of training and qualifications
- Varying levels of accountability, payment, and rewards
- Emphasis on rapid decision-making

These barriers could inhibit effective communication between pharmacists and other healthcare professionals as well as direct communication to the patient. Two of the more detrimental barriers are the tendency for healthcare professionals to work autonomously and the existence of hierarchies. Because these barriers continue to be engrained within the culture of healthcare, they remain difficult to overcome.

Hierarchies in particular can cause information to be distorted or withheld. Without an environment of mutual respect, individuals at the lower end of the hierarchy may be reluctant to speak up which could result in critical information being missed, lost, forgotten, or misinterpreted.

While there will always be interprofessional differences in training, qualifications, and compensation between pharmacists and other healthcare professionals, there are also certain shared values such as the importance of providing responsible medication management and quality patient care. These shared values represent a good starting point for pharmacists to develop effective communication by first building relationships with other healthcare professionals.

Effective Communication "Systems"

There is an abundance of literature to support the use of various structured communication tools in order to successfully communicate complex information over a short period of time. However, regardless of the tool utilized, the common theme is standardization of communication.

Perhaps the most widely recognized tool for effective communication management that has been studied in the healthcare system is known as Crew Resource Management (CRM). Founded in the aviation industry, CRM was initiated in response to a report that 70% of all commercial flight accidents were caused by communication failures in the cockpit.[10,11] The comprehensive CRM program, which emphasizes various safety checks such as briefings, checklists, and read-backs, can also be applied in a variety of pharmacy environments. By applying the CRM methodology, pharmacists can reduce the risk of medication errors in a number of ways such as readbacks on all verbal medication orders, checklists for medication order review and dispensing, and redundant safety checks on high alert medications.

Some other examples of standardized communication tools include SBAR (Situation Background Assessment Recommendation) and STICC (Situation Task Intent Concern Calibrate) which have been embraced by many healthcare organizations as important safety tools. While these tools do not involve nearly the same degree of training as CRM, the concept remains the same of providing a framework for communication of critical information between healthcare professionals.

These standardized communication tools are useful options for improving the collaboration between pharmacists and other healthcare professionals, but they merely scratch the surface in regards to a future solution. Because the breakdowns in communication that occur in the healthcare system are often the result of cultural deficiencies, the ultimate solution resides in the cultivation of a culture built on interdisciplinary respect, trust, and collaboration.

The first step toward establishing this sort of culture based on teamwork is to build relationships across disciplines. Every pharmacist (and pharmacy student) has opportunities to do this and not only learn different communication styles, but also feel more comfortable collaborating with professionals outside the pharmacy profession. Whether this is accomplished through membership in a professional organization, enrollment in multidisciplinary courses, or forging relationships in the work environment, it would facilitate the development of stronger communication and teamwork between pharmacists and other healthcare professional groups.

The end result of a healthcare model built on effective communication and teamwork would be a model characterized by consistent priorities between healthcare professionals, a clearly communicated treatment plan, reduced risk of medication errors, and an overall improvement in the quality of patient care provided. ❖

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calendar

July 8:
Residency Conference, Greensboro

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September 24:
Student Leadership Conference, Pinehurst, NC

October 23-25:
Annual Convention, Greensboro

More information at www.ncpharmacists.org

NCAP Acute Care Practice Forum Meeting

The NCAP Acute Care Practice Forum Meeting was held March 24-26, 2011 at Embassy Suites in Winston-Salem, North Carolina. Pictured below, Tracie Rothrock-Christian (left) presents the Acute Care Pharmacist of the Year Award to Kathey Fulton Rumley.

"Thank You" to our Exhibitors

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2010 Recipients of the "Bowl of Hygeia" Award

The Bowl of Hygeia award program was originally developed by the A. H. Robins Company to recognize pharmacists across the nation for outstanding service to their communities. Selected through their respective professional pharmacy associations, each of these dedicated individuals has made uniquely personal contributions to a strong, healthy community which richly deserves both congratulations and our thanks for their high example. Over the years a number of companies have supported the continuation of this worthwhile program, including Wyeth and Pfizer. The American Pharmacists Association Foundation, the National Alliance of State Pharmacy Associations and the state pharmacy associations have assumed responsibility from Pfizer for continuing this prestigious recognition program. The Bowl of Hygeia is on display in the APhA Awards Gallery located in Washington, DC.

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Facebook page created to facilitate networking

By Kimberly P. Lewis, PharmD, CACP

In an effort to continually enhance and encourage professional communication among pharmacists, NCAP has created a Facebook page. If you have used the internet in the past year, then you have undoubtedly seen the evidence of social networking and perhaps have gauged how rapidly it is evolving. Social networking is everywhere you look online, and it is even making its way into everyday discussions with friends, family, and colleagues. If you have ever heard someone say "Facebook me" or "follow me on Twitter," but have not considered the potential benefits that social networking can have on your professional life, you may want to reconsider.

There is a plethora of information that is nearly impossible for pharmacists to keep up with on a day-to-day basis. By creating a Facebook page, NCAP is not only creating a line of communication within the profession of Pharmacy, but also a platform for collegial networking for everyone involved.

If you already have a Facebook profile, the process of connecting with NCAP and other NCAP members is easy! Simply go to https://www.facebook.com/pages/North-Carolina-Association-of-Pharmacists/136657113055347 and join us! If you don't have a page you can create one without your privacy being violated. You can customize your privacy settings on Facebook so you share only what you want to share and control who sees your information, who can make posts on your "wall," etc. Please join us!

NPN Member Spotlight:

Jennifer Rinkes-Smith, PharmD

Upon graduation from West Virginia University School of Pharmacy in 2008, I completed a community pharmacy practice residency with the University of North Carolina and Kerr Drug in Chapel Hill. During my residency I acquired the skills and experience necessary to provide quality patient care programs including medication therapy management (MTM) and immunizations. My decision to stay and practice in North Carolina after the residency was due to the obvious progression of pharmacy practice here, along with the opportunity to expand the community pharmacist's role. As a clinical dispensing pharmacist with Kerr Drug, I have a unique opportunity to work in the typical dispensing setting, while incorporating MTM and immunizations into the workflow. My passion for providing direct patient care and desire to expand community pharmacy further into an integral part of the health care team serves as a foundation for my involvement in the North Carolina Association of Pharmacists. As a new practitioner, it is important for me to have resources available to stay current on new clinical developments and legislative issues that affect the practice of community pharmacy. The most significant resources are my fellow colleagues across the state, especially those who I have met through NCAP. As member-at-large of the New Practitioner Network, I am able to take an active role in advocating for the profession. My membership in NCAP provides me these resources and opportunities and it is my goal to continue my involvement in order to lead a successful career. ❖

NCAP Representatives Met Lawmakers at 2011 NACDS RxIMPACT Day on Capitol Hill

The Third Annual NACDS RxIMPACT Day on Capitol Hill was an incredible success! More than 350 pharmacy advocates, including NCAP representatives and students, met with lawmakers on March 9 to urge the importance of pharmacy in improving patient health and reducing costs. NCAP was represented by Executive Director Fred Eckel, Executive Resident Morgan Norris, and pharmacy student Julie Kennerly who was completing a rotation at NCAP. Funding was provided by NCAP to help students from all three North Carolina schools of pharmacy attend the event.

The hard work of pharmacy advocates, both in Washington, DC and across the country, produced outstanding results:

- Participants met with nearly half of all members of Congress, resulting in more than 255 scheduled meetings with 186 Representatives and 59 Senators.
- 70 percent of these meetings were with members of Congress serving on healthcare committees.
- Meetings were conducted with 112 Democrats, 142 Republicans, and one Independent.
- Pharmacy advocates met with 70 of the 112 newly-elected members of Congress.

Burch Receives Fearing Award

Durham pharmacist Jennifer Burch, PharmD, received the 2011 M. Keith Fearing, Jr. Community Pharmacy Practice Award from Campbell University on March 31.

"This is a great honor," said Burch. "Receiving this award helps re-ignite my passion for the profession."

Presented annually, the award was created in memory of M. Keith Fearing, Jr., a 1941 Campbell alumnus who was a key pharmacy leader in North Carolina. He established the first pharmacy in Dare County in 1947 and served as a founding member of Campbell University School of Pharmacy.

"Jennifer's practice epitomizes what the Fearing Award was designed to recognize: patient dedication, community engagement and professional involvement," said Ronald Maddox, PharmD, vice president of Health Programs at Campbell University. "I'm very proud to recognize one of our Campbell graduates with this community pharmacy award."

After graduating from Campbell University in 1993, Burch returned to her hometown of Durham to work for her parents at their family-owned drug store, Central Pharmacy.

"At that time the pharmacy didn't have enough business for my parents to hire me, so I had to create my own position," said Burch. She helped her parents expand the pharmacy's patient care services and compounding lab.

Eventually, she was hired as a full-time employee.

The family established Central Compounding Center in 2002, splitting their business between two locations in Durham. Two years later, Burch's parents retired placing her in charge of both stores.

In 2006, Burch became a first-time business owner when she opened Central Compounding Center South.

In all three pharmacies, Burch provides services to improve her patients' health. She works closely with physicians and her patients to get the best outcome. Bio-identical hormone replacement therapy, weight loss, diabetes, and nutritional supplementation are her specialties. ❖

Chronic Care Practice Forum Meeting

The NCAP Chronic Care Practice Forum Meeting was held March 31 through April 1, 2011 at Embassy Suites Golf and Resort in Concord, NC. Pictured above (l to r): Charlotte Matheny, Dale Jones Memorial Award recipient Robert K. Smith and Judy Jones.

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Pharmacy Time Capsules

1986: Twenty-five years ago

• Reye's syndrome warning required to be added to all aspirin labels.

• The American Association of Pharmaceutical Scientists (AAPS) was formed with almost 3,000 charter members.

• Human Genome Project launched with the object to understand the human genome and therefore provide the continuing progress of medicine

1961: Fifty years ago

• President Kennedy signed Public Law 87-319 designating the third week in March as National Poison Prevention Week.

1936: Seventy-five Years Ago

• The use of radiopharmaceuticals began when John Lawrence administered a radioactive isotope of phosphorus-32 to treat chronic leukemia.

1911: One hundred years ago

• The US Supreme Court ruled against Dr. Miles Medical Co., which had sued a distributor for selling its products at cut rate prices.

1886: One hundred twenty-five years ago

• The University at Buffalo School of Pharmacy and Pharmaceutical Sciences opened.

By Dennis B. Worthen, Lloyd Scholar, Lloyd Library and Museum, Cincinnati, OH

One of a series contributed by the American Institute of the History of Pharmacy, a unique non-profit society dedicated to assuring that the contributions of your profession endure as a part of America's history. Membership offers the satisfaction of helping continue this work on behalf of pharmacy, and brings five or more historical publications to your door each year. To learn more, check out: www.aihp.org

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—Jeanie Barkett, RPh, Long Term Care Pharmacy Lead Pharmacist, Providence Specialty Pharmacy Services, Portland, OR

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Election, Award Nominations Sought

NCAP Election

Deadline for nominations: June 20, 2011.

NCAP Members are invited to submit their names or nominations for the 2011 election.

NCAP Board of Directors

NCAP will elect a 2012 President-Elect (to serve as President in 2013, 3-year term) a Treasurer (3-year term) and one At-large Board member (3-year term). Send your name and/or your nominations to NCAP Nominating Committee, 109 Church Street, Chapel Hill, NC 27516, fax 919-968-9430 or e-mail linda@ncpharmacists.org.

Acute Care Practice Forum

The Practice Forum will elect a Chair-Elect (3-year term), three Executive Committee members (3-year terms) and one Delegate to ASHP (3-year term). Send your name and/or nominations to: Tracie Rothrock-Christian, Chair, tracie.rc@duke.edu.

Chronic Care Practice Forum

The Practice Forum will elect a Chair-Elect (3-year term) and three Executive Committee Members (3-year terms). Send your name and/or nominations to Ken Tuell, Chair, kwtuell@aol.com.

Community Care Practice Forum

The Practice Forum will elect a Chair-Elect (3-year term) and two Executive Committee members (3-year terms). Send your name and/or nominations to Melinda Childress, Chair, mchildress05@yahoo.com.

Awards

Deadline for nominations: June 20, 2011.

It is a privilege for the North Carolina Association of Pharmacists to recognize excellence within the profession. NCAP will present the following awards at the Convention, October 23-25 in Greensboro, NC. The Board of Directors invites NCAP members to nominate deserving members for these awards. Nominations must be in writing (a nomination form is on the web site www.ncpharmacists.org or you may request one from Linda Goswick). Submit to the NCAP Awards Committee, c/o Linda Goswick, 109 Church Street, Chapel Hill, NC 27516, fax 919-968-9430 or e-mail linda@ncpharmacists.org.

Bowl of Hygeia Award

Criteria for this award are: (1) Licensed to practice pharmacy in NC; (2) Has not previously received the Award; (3) Is not currently serving nor has he/she served within the immediate past two years on its awards committee or as an officer of the Association in other than an ex officio capacity; (4) Has compiled an outstanding record of community service, which, apart from his/her specific identification as a pharmacist, reflects well on the profession.

Don Blanton Award

Presented to the pharmacist who has contributed most to the advancement of pharmacy in North Carolina during the past year. This award was established by Charles Blanton in memory of his father, Don Blanton, who served the North Carolina Pharmaceutical Association as President 1957-58.

Innovative Pharmacy Practice Award

Presented to a pharmacist practicing in North Carolina who has demonstrated Innovative Pharmacy Practice resulting in improved patient care.

Pharmacists Mutual Distinguished Young Pharmacist Award

Criteria for this award are: (1) Entry degree in pharmacy received less than 10 years ago (2001 or later graduation date); (2) Licensed to practice pharmacy in NC; (3) Actively practices retail, institutional, managed care or consulting pharmacy; (4) Participates in national pharmacy associations, professional programs, state association activities and/or community service. **Please send nominations for this award to Minal Patel, Chair of the New Practitioner Network, mipatel@wfubmc.edu.**

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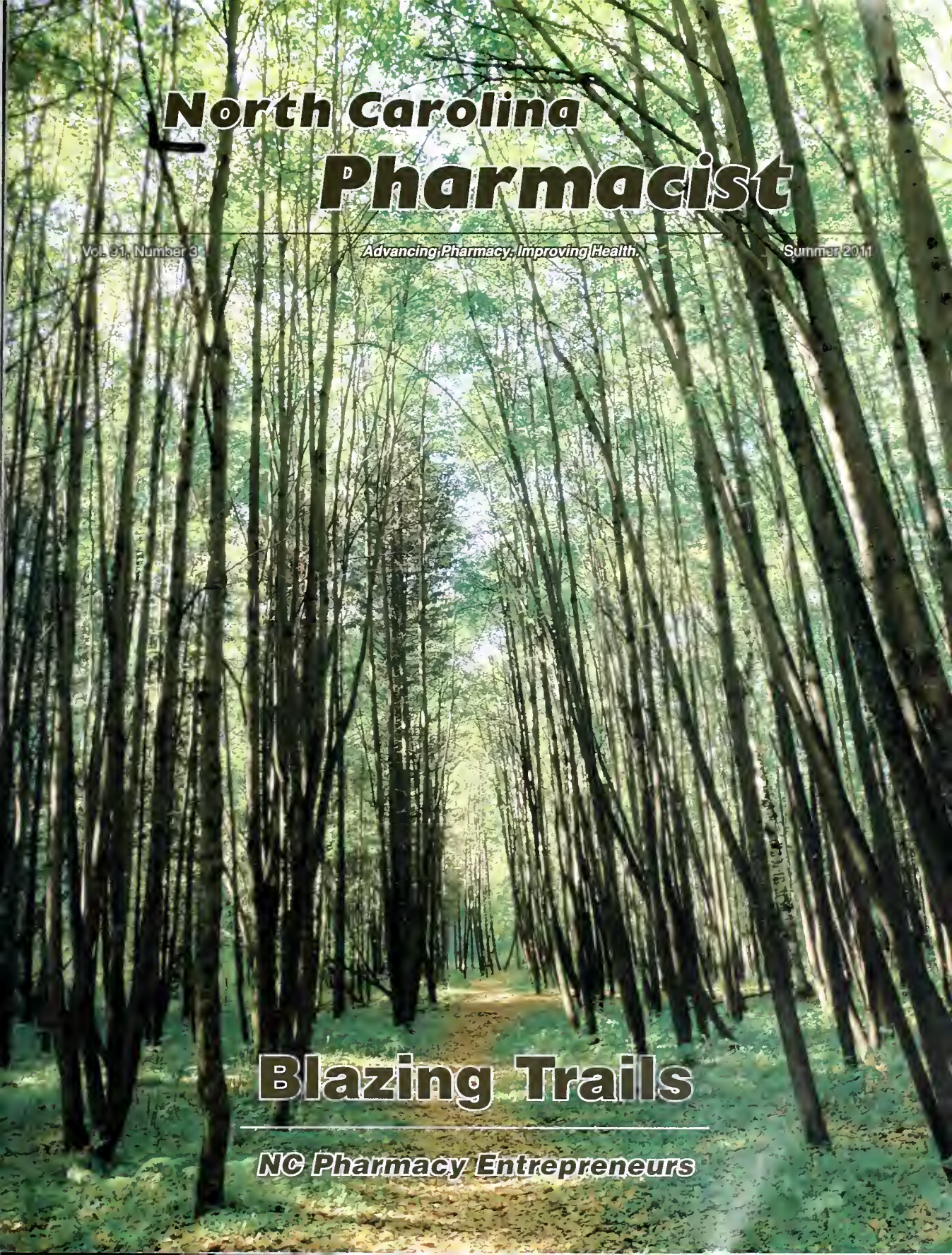

North Carolina Pharmacist

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Advancing Pharmacy. Improving Health.

Summer 2011

Blazing Trails

NC Pharmacy Entrepreneurs

Save the date!

NCAP Annual Convention

Safety Dance: Empowering Pharmacy for Medication Safety

October 23-25 • Sheraton Greensboro

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"Jail time for a medication error: Lessons learned from a pharmacy compounding error"

A presentation by Eric J. Cropp, RPh, BS

Eric Cropp received six months jail and six months house arrest in the death of 2-year old Emily Jerry. Cropp was the supervising pharmacist who approved an improperly mixed chemotherapy solution that killed Emily in 2006. Be sure to hear his story.

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Plus ASHP sponsored programs: Preventing a Stroke in A Fib & REMS

Back by popular demand: Keynote Speaker Don Yaeger

Don is a six-time *New York Times* Bestselling author and former *Sports Illustrated* Associate Editor. Using rich, personal accounts gathered from more than 20 years of interviews with many of today's greatest sports legends, Don has distilled Sixteen Consistent Characteristics of Greatness, which he will share with us. This year he'll speak about his relationship with football player Michael Oher, whose story was told in the Hollywood hit "The Blind Side."

Look for more information in *E-News Now* and at www.ncpharmacists.org

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North Carolina Pharmacist

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Inside

The End of the Beginning

After a crucial victory for England in the Second World War, Winston Churchill stated, "This is not the end, nor is it the beginning, but maybe it's the end of the beginning." I use this thought frequently as I celebrate important professional events like graduations. I am now thinking about this concept in my own career as I plan to leave NCAP as Executive Director. Is this the end of my professional career or could it be the beginning of a new professional focus or even a whole new career? I have enjoyed my time at NCAP. Running a state pharmacy association is one of the most exciting jobs in pharmacy. You work for great people – pharmacists. You work with an outstanding staff, and you are exposed to all the issues affecting pharmacy at the state and national levels. I represent NCAP at the National Alliance of State Pharmacy Associations (NASPA) meetings. My fellow state pharmacy association leaders are the most helpful colleagues and are always willing to share ideas, forms or procedures to make the job easier.

I feel like I have learned much in my eleven years at NCAP. I hope to continue to share what I have learned through my teaching at UNC Eshelman School of Pharmacy. I began teaching there in 1967. I am also continuing my role as Editor-in-Chief of *Pharmacy Times*. Writing an Editor's Note each month gives me another avenue to share what I have learned. I have been working with this publication in different roles since 1988. So, in some ways it is not even an "end" for me because I am continuing to do what I have enjoyed doing for most of my fifty years in pharmacy.

One of the exciting developments in North Carolina pharmacy is how Community Care of North Carolina (CCNC) has begun to add a pharmacist component. This group was charged to implement a new program of integrating a community-based pharmacist and the pharmacy in which they work into a medical home. I plan to work with CCNC to help implement this new project. If successful, I could see this project become pharmacy's next "Asheville Project." I would hope the contacts I've gained through my eleven years at NCAP and my forty-five years involved in North Carolina pharmacy will enable this project to achieve a successful outcome. As I look forward to this new challenge, I have arrived at the end of one beginning as I use what I have learned at NCAP and NASPA to create a new program to demonstrate the pharmacist's value.

In another way this transition is not even an end for me because I plan to continue at least a volunteer role in NCAP. In 1970 I assumed the volunteer position of Executive Director of the North Carolina Society of Hospital Pharmacists and have been involved with hospital pharmacy professional organizations throughout my career. Perhaps I can continue to stay involved in NCAP as the administrative staff for the Acute Care Practice Forum, coming back to my roots in pharmacy. Of course, whatever role I play in NCAP will be up to the person who replaces me. In order to assure a smooth transition I do plan to stay actively involved with NCAP as Executive Director Emeritus for at least six months.

Whether I am at the beginning of a new venture in life, continuing a venture that I started in 1961 when I graduated from the Philadelphia College of Pharmacy and Science, or coming to an end, I have truly enjoyed the journey. Life is not about reaching a destination, but enjoying the venture. If I have made some small contributions along the way, all the better. Thank you for your support and for allowing me to take most of my professional journey in North Carolina. ❖

North Carolina Association of Pharmacists
109 Church Street
Chapel Hill, NC 27516
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Dear Members,

My campus minister at Campbell University was famous for repeating the phrase, "The main thing is to keep the main thing the main thing." What is the main thing for NCAP? Think about that for a few minutes while I tell you about my garden.

Growing up in North Carolina, both of my grandfathers farmed. Evidently, the ability to grow vegetables is not a genetic trait. I have these dreams of long, straight rows filled with wonderful vegetables. Typically, my reality has been an overgrown, drought-stricken corner of my suburban lot. This year I read about square foot gardening. The theory is small, accessible and organized plots that allow for maximum yield in a small space. My garden experience has changed this year. I may not have the long rows marching off to the horizon, but I do have tomatoes and for now that is enough. Working within any organization is often like trying to create my grandfather's garden; it is a daunting task. It is difficult to know where to begin or how to begin. Projects can be large. However, the core skill to success in an organization is the same as in the garden. Focus on what can be accomplished. Create areas that are small, accessible and organized and the larger goals will come with time. I realized what I wanted to focus on in this issue after the last Board meeting. I was speaking with Davie Waggett and Jennifer Buxton. They were referring to how you do not have to do everything in an organization. You just have to do the next right thing. That is how it is for you as a pharmacist and your participation in NCAP. You do not have to do everything, just the next right thing. For most of us the next right thing is to overcome the thought that there are other people, other pharmacists who have it covered. If that is the case then the next right thing for you to do is to show up. Show up at a Practice Forum meeting, show up at an annual conference, and show up at a Board meeting. Your physical presence at any of the meetings will lead you to the next step, and the next step.

Now back to my original question. What is the main thing for NCAP? The Main Thing is to unite pharmacists in our state. As a consolidated organization there will be times when we disagree. There have been times this year when we have disagreed on issues before our profession. However, NCAP is the place for open, vigorous debate. It is the place where the facts about an issue can be clearly presented. After we have wrestled with an issue honestly and openly we can present a unified front to the public for the benefit of society. We still may disagree, but it prevents the profession from appearing fractured and self-serving. The Main Thing for NCAP is to serve. Serving as pharmacists is not just for our patients but for each other. Serving means to come together to help protect the profession against unfair trade practices or unnecessary regulation whether or not it directly affects your practice. The Main Thing is to advance our profession for the benefit of society. Advancing our profession leads back to my first point, involvement, doing the next right thing, and finding it was to approach large opportunities in our profession in organized, accessible ways. Unite, Serve and Advance pharmacy for the benefit of society is the Main Thing.

Reading back over the end of my second paragraph I realize that I have repeated myself from previous letters to the membership. I offer no revision however. I will consider my term in the president's seat a success if at least one member of NCAP who has been paying dues, but has not been involved, becomes engaged in the process. I wish you all continued success this year.

Cecil Davis
President

Advancing Pharmacy. Improving Health.

Blazing Trails
NC Pharmacy Entrepreneurs

The greater the risk, the greater the reward

By David Schomberg, Jr., RPh, MBA
Owner, Yadkin Valley Pharmacy, Tanglewood Pharmacy & Yadkin Valley Assisted Care

Almost six years ago to the date you are reading this article, I, David Schomberg, Jr., became a business owner. It has been a thrilling, difficult and satisfying six years. I am currently the owner of two independent community pharmacies – Yadkin Valley Pharmacy in Yadkinville, NC, and Tanglewood Pharmacy in Clemmons, NC. I am also the owner of Yadkin Valley Assisted Care, a long-term care pharmacy focusing on the needs of assisted living facilities.

Two years out of pharmacy school in 1995, I had what you call a "light bulb moment." I was working at a familiar chain pharmacy as a staff pharmacist and I realized that I did not want to only be behind the counter my entire career. I wanted to make the decisions, I wanted to evaluate the workflow, I wanted to make the financial decisions and practice community pharmacy the way I wanted to practice. I had always had an interest in business and finance and it was at that moment I decided to pursue my Masters in Business Administration and one day become a pharmacy owner.

I completed my MBA in 2000 and had already changed my focus in pharmacy to long-term care. After working in long-term care and community pharmacy, I decided to open not one, but two pharmacies. A former roommate and fraternity brother had already opened an independent pharmacy, and he promised to help me in any way possible. I already knew where I wanted to open the store, so I simply started to plan.

Yadkin Valley Pharmacy was established in August 2005 in Yadkinville, NC, and is the only independent pharmacy in the area. Our mission is to provide excellent customer service and understanding of medications to all patients. We strive to know all our customers by name and to make the patients' experience in our pharmacy the best possible. Yadkin Valley Pharmacy employs two full-time pharmacists and four pharmacy technicians. We also have two pharmacy clerks and one delivery driver. We provide medication therapy management, immunizations, drive thru services and home delivery. Yadkin Valley Pharmacy is a teaching site for Campbell University School of Pharmacy and Forbush High School. The members of the Yadkin Valley Pharmacy team are more than co-workers; we are a family.

Yadkin Valley Assisted Care is a long-term care pharmacy located in Yadkinville, NC which also opened in August 2005. Originally the pharmacy was located in a building connected to Yadkin Valley Pharmacy. However, the pharmacy quickly outgrew the initial space and in April 2011, relocated to a new 5,000 square foot building. Yadkin Valley Assisted Care employs two pharmacists, five technicians, one business manager and two delivery drivers. I am very proud of what we have developed at Yadkin Valley Assisted Care; being one of the first long-term care pharmacies to embrace automation in our dispensing process.

The most recent addition to my vision of pharmacy practice is Tanglewood Pharmacy. Located in Clemmons, NC, Tanglewood Pharmacy opened in July of this year. While providing the same high quality customer service and pharmacy opportunities, Tanglewood Pharmacy also has more than medications within the 1400 square feet space. Tanglewood Pharmacy is proud to stock many organic and natural skin care products and candles. We employ 1.5 pharmacists, two technicians, two cashiers, and one delivery driver.

What I like most about independent pharmacy is that you can control your own strategic planning. You make the decisions and do not simply follow the orders from a corporation when it comes to long-term and short-term business strategy. Being a pharmacy owner allows you to take risks and pursue avenues not generally allowed by corporations to a pharmacist. For example, you may decide to pursue an idea and find in six months it is not the best idea; then you can alter your focus and ideas to work better or try something new. You don't need permission from anyone else.

As the saying goes, there is nothing like working for yourself. Yes, you work hard and make many sacrifices to grow your pharmacy business; however, in the long run, you are the boss. There is nothing more satisfying than to see your vision become a reality. Flexibility in scheduling comes with time and allows for better hours, involvement with family activities and overall, an improved quality of life. Honestly, I could not have accomplished all that I have without the support of my wife and children. They have made many sacrifices to make my dream our reality. All my hard work has also increased my career satisfaction. I am able to provide more personalized care to the customer on the retail side. In long-term care, I am altering processes to improve outcomes, embracing technology and understanding all aspects of patient care. I can promote best practice and be a pharmacy innovator – not follower. I know my ideal customer and develop processes to meet their needs.

Starting a business is not without obstacles. Initially, good retail location can be a challenge. As the business grows, cash flow, inventory management, and leading a large group of employees can be difficult. As the pharmacy owner you will wear many hats. You cannot just be a business manager or a clinician – you have to do it all. Other obstacles include understanding government contracts and reimbursement.

The greater the risk, the greater the reward. Anything worth achieving requires hard work and an element of risk. Sure,

you have to work very hard and many hours. There are always the inherent risks of government decreased reimbursement, making payroll, staff departures and a big box store opening across the street. There is no guaranteed income, no biweekly paycheck, and you are required to pay off debt over the long term. You must be committed and invested in this business for the long term. You cannot look for another job when things get tough.

I would love to see more pharmacists creating their own business opportunities. I would advise those interested in starting their own business to not go into business because you think it will be easier than your current position. There is nothing easy about it. You have to truly enjoy the business side (i.e. financial planning, inventory management, leading people, managing processes) as well as being a pharmacist. A few key pieces of advice include:

- Plan, Plan, Plan
- Create your vision and work backward to make it a reality
- Ask questions and get to know your colleagues
- Become involved with political lobbying and pharmacy organizations
- Hire people you can trust
- Do not be afraid of being the boss
- Have a positive attitude
- Realize that you will have good days and bad
- Never shy away from the business you want to create
- Buckle in and enjoy the ride!

Never second guess, never look back

By John Kessler, PharmD
Founder & Chief Clinical Officer
SecondStory Health, LLC

In an article about entrepreneurship, I suppose I should write about the problems of a start-up, the risk of failure, business plans, financing, the long delay between risks and reward, and the merits of being your own boss. I could do that, but I'd rather look back at my path to being entrepreneurial. Perhaps these reflections might even mirror your current situation or aspirations.

The SecondStory Health LLC of today was likely born out of experiences from my childhood. Before I recognized my passion for medication safety, strangely enough as a kid, I looked forward to reading the safety magazines from the chemical plant where my father worked. The large billboard in front of the plant disclosed the number of days without a lost-time injury. It was an "in your face" safety metric that everyone understood. My passion for safety has clearly influenced my career decisions. More than 30 years ago, I had developed a clinical practice at a rural hospital in Appalachia. I saw first-hand how starting unit dose and an IV admixture systems improved medication accuracy. In subsequent years, I learned the value of drug information services and how this specialty practice organized information in systematic ways to improve medication use. If there was one crystallizing experience that directed my future, it was the year that I traveled 8,000 miles from NC to the Medicines Safety Centre in the Department of Clinical Pharmacology, University of Cape Town. While there, I was part of a team of physicians, scientists and pharmacists collaborating on medication safety projects within the hospital and across South Africa. What most impressed me was the way they positioned and marketed safety surveillance – rather than promoting a center to collect adverse event reports, they promoted a center to help clinicians solve their clinical problems with better drug information and clinical consultation. As a by-product of our consultations, we were able to collect data about errors and adverse reactions that might not have been reported without the consultative exchange. Lesson 1: customers want value in exchange for their information – things aren't always what they seem.

Fast forward five more years and I found myself presented with an offer to join the clinical management ranks at Duke University Hospital. Duke was a great place to learn and to gain exposure to national and international projects. My initial plan was to spend 10 years refining my business skills and then start my own company with the fuzzy idea of "doing consultations." Well, my 10-year plan turned into a 15-year experience. Lesson 2: it's OK to change your plans whenever you want to, but hold yourself accountable to the changes and goals.

Taking the leap into the entrepreneurial (business) world really meant leaving. From one perspective, I was leaving outstanding co-workers, leaving a great job, leaving a healthy paycheck and perceived job security, and in the opinion of some - even leaving "pharmacy." These thoughts can take your breath away. From another perspective, taking the leap also meant expanding my professional network, creating a new job and opportunities for others, and continuing to practice pharmacy at a much different level. When you are in transition, your vision is obscured and thinking can become distracted. It took supportive friends and honest advisors to help me see these perspectives and ultimately make the decision to leap. Lesson 3: the old axiom is true – when one door closes, another opens.

Unexpectedly, I learned that once you are perceived by others as "independent" (i.e. not employed), new opportunities emerge. Your new identity is formed around your new company and increasingly less around your past. The doors began to open. The first day that I was "unemployed" I also signed a new consulting agreement. Within six months, my partners and I secured a contract to install the software we had been developing for more than two years. Unlike our competition, our company would not be satisfied with simply tracking errors and adverse reactions. We believed there was always a second-story waiting to be discovered – whether it was the complex contributing factors that led to error or the organizational behaviors and responses to error – the story behind the story was the more important piece of information to understand. Within a year, we developed PQA-PaLS™ a pharmacy quality assurance toolkit and learning system for community pharmacies. Through the support of Mutual Drug Wholesale in Durham, and VIP Computer Systems in Hillsborough, we contracted with nearly 200 pharmacies in NC, WV, VA and SC to provide quality and safety tools and services. Our growth wasn't confined to domestic boundaries. Through networking, international safety consulting opportunities emerged in Brazil and the Middle East. We continued to sell our original SecondStory adverse event management software to hospitals while also contracting to develop and customize safety software for large retail pharmacy clients. While some doors naturally closed, others continued to open and new

partnerships were formed. SecondStory Health now provides medication error analysis/data management services for the Alliance for Patient Medication Safety (APMS), a federally listed Patient Safety Organization with nearly 3,000 community pharmacies enrolled. We consult with an innovative company marketing patented optical spectroscopy technologies to improve medication safety in multiple clinical environments. In the last year, we were awarded a contract from the NC Office of Rural Health and Community Care to establish a medication safety consortium for critical access and rural hospitals. We aspire to create a nationally recognized level of excellence within community-based care practices. The North Carolina Consortium for Medication Safety (NCCMedS™) deploys teams of medication safety advisors to work directly with 28 hospitals in NC with the goal of understanding their unique needs and developing effective solutions.

Aside from growing the projects that we've begun, I really don't know what might happen tomorrow – and that's OK. I can say that our focus will always be on medication safety, in whatever form that takes for our clients and our profession. My advisors have remarked that I was willing to give up financial security and career advancement in exchange for high uncertainty and the possibility of failure. Frankly, my vision never included failure and I embraced uncertainty. For me, the bigger mistake would be to have a life imagined, but never achieved. Good luck on your journey. Never second guess and never look back.

Innovation is the key to success

By Bryan Bray, PharmD, CPP
Chief Operating Officer,
Medication Management, LLC
Vice President,
Piedmont Pharmaceutical Care Network, LLC

Medication Management, LLC and Piedmont Pharmaceutical Care Network, LLC are two distinct, non-traditional pharmacy practices. Medication Management, LLC has been in business for eight years whereas Piedmont Pharmaceutical Care Network, LLC has been in business for 11 years. Both of these practices were conceptualized by several visionary pharmacists whose intent was to extrapolate clinical pharmacist services or "pharmaceutical care," as the term was coined, to the ambulatory care patient population and to create opportunities for pharmacists to practice in this setting. Additionally, the intent was to prove the clinical and financial impact of clinical pharmacist's services and do so in a scalable business model.

Medication Management's core business is the integration of a clinical pharmacist into a medical practice, performing clinical research for Phase 2 through Phase 4 drug trials and specialty consultative projects such as e-prescribing. Operationally, the medical practices with which Medication Management works are statewide with a focus in the Triad region. The core of the research portion of the practice does take place in Greensboro. The function of the clinical pharmacist in the physician practices ranges from collaborative drug therapy management as Clinical Pharmacist Practitioners (CPPs) to medication therapy management services and integration of a clinical pharmacist into the Patient Centered Medical Home model. In addition to several private physician practices in Greensboro, Medication Management continues to work very closely with AccessCare in an effort to integrate clinical pharmacist services into projects such as the Medicare 646 Demonstration Project and the Multipayer Demonstration Project. Typical services range from disease specific areas such as diabetes, anticoagulation, hypertension and hyperlipidemia management to traditional medication therapy management services/general pharmacotherapy consults to medication reconciliation. Currently Medication Management employs 14 pharmacists, one certified medical assistant, one research coordinator, one clinical trial manager, one network administrator, one director of finance and one vice president of sales and marketing. The rationale behind starting Medication Management was to develop a business framework to support the contracting with physician offices as well as other entities such as AccessCare, and as the business framework to support clinical drug research trials. The groundwork for the practice was essentially formed by the experience of the business partners in long-term care consulting and a desire to extrapolate the experiences, opportunities and lessons learned to ambulatory care or community dwelling patients. The most formable challenge that the practice has faced has been the lack of recognition of pharmacists as healthcare providers by the Social Security Act. This significantly restricts the reimbursement that clinical pharmacists receive through the physician practice to the point it remains financially impossible to construct a profitable practice on the physician practice model alone.

Piedmont Pharmaceutical Care Network, LLC is a network of clinical pharmacists that contracts with employer groups to provide disease management services and medication therapy management services. The practice is modeled after the well-known "Asheville Project." The core of Piedmont Pharmaceutical Care Network's customers are in North Carolina, but the practice also has customers in Wisconsin, Kentucky, Alabama and Tennessee. The target disease states in which services are provided include diabetes, cardiovascular (includes hypertension and hyperlipidemia), asthma and depression. In addition to providing comprehensive medication therapy management for these disease states, provider pharmacists also provide disease and drug therapy education as well as self-management skill teaching for the patients in the programs. The practice provides a comprehensive analysis of medical and pharmacy claims prior to instituting the program to identify targets. Once the program completes a year, and on each year that follows, there is a comprehensive analysis done on the clinical impact as well as the financial impact on the outcomes of the services provided. A composite of this analysis is then presented to the employer group to demonstrate the value of the services. Piedmont Pharmaceutical Care Network does not have any direct employees but does independently contract with clinical pharmacists to provide the services. Currently Piedmont Pharmaceutical Care Network, LLC has 55 provider pharmacists. The provider pharmacists must meet rigorous credentialing requirements in order to be a provider in the network. These credentialing requirements include experience, residencies, board certification such as the BCPS or the CGP and the disease specific certification programs offered through the North Carolina AHEC system. One of the biggest challenges of the practice has been the identification and

recruitment of provider pharmacists that are not only qualified, but also willing to make the practice transformation to be able to provide the services. An additional challenge is the amount of overhead required to manage the accounts with the employer groups appropriately and efficiently. And lastly, the consistent application of quality of care measures across the board for all provider pharmacists and patients has been a challenge.

The advantages of being self-employed in both of these practice models is centered in two areas. The biggest advantage is in the area of innovation. Both practice models have provided a clear path and opportunity to provide for innovative solutions for patients, employer groups and physicians to greatly improve the delivery of healthcare. Within this innovation, the practice has allowed pharmacists to practice at the full extent of their license by providing such services as collaborative drug therapy management, disease management and medication therapy management services. Autonomy as with any self-employment situation is a distinct advantage as well but it is particularly important in the ability to develop the innovation mentioned above.

The disadvantage of being self-employed in this practice model is typical of most small businesses and include things such as managing cash flow, managing growth efficiently and economically, and managing overhead to name just a few. For the business partners, a disadvantage is the amount of time required to just run the business which means many nights and weekends are spent working on administrative tasks. Overall, the advantages of being self-employed in this particular practice model clearly outweigh the disadvantages.

My advice to any pharmacist considering becoming self-employed in such a practice model is to clearly define the scope and extent of services to be provided. Avoid the pitfall of attempting to initiate the services all at once by prioritizing. Additionally, it is important to develop a pro forma of all services to be provided that will evolve into a forecast of expected profits and losses. Clearly track cash flow against these forecasts and be prepared to make quick, concise decisions on the directions the practice is headed. Do not be afraid to make the difficult decisions on the services that provide for the most profit and those that consistently lose money. Innovation is definitely the key to success. Lastly and perhaps most importantly, quickly institute the practice transformation that is required for the practice to be successful. On the surface this means transitioning from a product-based practice to a cognitive service-based practice but the deeper meaning is to clearly define your patient population, specific services to be provided, payer sources, number of patients required to be seen a day, support services required to operate the practice (i.e. nurses, clerical staff, etc.) and overhead (i.e. office space, supplies, phones, software, etc). The quicker you can transition your practice to a "physician-like practice" model and all that goes along with that, the more successful you will be.

Controlling your own destiny

By Nancy McFarlane, RPh
President & CEO, MedPro Rx, Inc.

MedPro Rx, Inc. is a Raleigh, NC based retail pharmacy that focuses on specialty pharmaceuticals, primarily those used to treat a variety of chronic conditions related to rheumatologic, neurologic, immunologic, and bleeding disorders. We employ 37 people on a full-time basis with an additional 45+ part-time employees. Our team consists of pharmacists, nurses, pharmacy technicians, reimbursement specialists, community advocates, inventory managers, financial analysts, delivery personnel, sales representatives, and other operations personnel.

We have current pharmacy licenses in 29 states and based on those licenses, can provide pharmacy services to an additional 3 states plus the District of Columbia. We service clients throughout a multi-state region ranging from Florida through North Carolina, north to the NY Metro area and west to Ohio.

Like most entrepreneurs, I was looking for a chance to better control my own destiny while balancing my work life, personal life, and civic life. Starting MedPro Rx seemed like a way to do that. While keeping that work, personal, and civic life balance is still the goal, it is an ongoing process. It takes focus and a lot help from my excellent team members to maintain it. It does help that I have been able to choose my own team; people I like and with whom I want to work who also happen to be excellent at their jobs. Since moving here in the mid-eighties, I have found the Triangle area to be a wonderful place to live and work. People move here for the opportunity our region brings. Finding talented people to join the MedPro team has been helped by that fact. My team works with me to set the standards for my own business. Whether we are developing our clinical excellence programs, committing resources to the community, or simply working with clients in a way we know they deserve, it has been my privilege and responsibility to help shape that effort with my team. When facing unnecessary red tape or other barriers to achieving excellence, you get to put your best efforts into fixing it. It is, after all, your business, and you are your team's leader. In the famous Pogo comic strip by Walt Kelly, an exasperated Pogo described his team's inability to overcome such barriers by saying: "We have met the enemy and he is us." We work hard to avoid that at MedPro.

How did we get started? We simply started "small." As a new pharmacy business, we had limited financing options to do anything but that. There were some helpful local banks, but the reality of limited fixed credit lines and extremely tight payment terms made for a real focus on doing everything right at a level that could be sustained financially. That habit has fortunately been carried through over the years and benefits MedPro Rx today.

Facility-wise, MedPro Rx first leased a 500 sq. ft. space that opened as a pharmacy in late 2002. We later added another 1000 sq. ft. space, and eventually expanded that to 3000 sq. ft. In February 2007, after extensively renovating an older building, we moved into our present 6000 sq. ft. pharmacy in Raleigh.

Starting a business from scratch presented many challenges that I did not fully appreciate until they arose. I was fortunate that our banker connected us with the State of North Carolina's Small Business and Technology Development Center for startup businesses like ours. The biggest obstacle was obtaining financing. As a new business, most credible lenders only finance what you can collateralize. In our case, that meant using our house as collateral. That's a big motivation for you

when you are committing your home as collateral while depending on the success of a startup business to keep you there.

Another obstacle was gaining credibility in the marketplace as a viable specialty pharmacy provider. Specialty pharmacy is a unique type of pharmacy. The drugs are very expensive and often require special handling or professional help to administer. Some specialty drugs have restricted distribution. As the new pharmacy in town, our company was unknown to manufacturers, distributors, referral sources, and the patients themselves. Fortunately, the people who helped form the MedPro Rx nucleus were well known and respected. Still, it took several years to get traction in the marketplace. Though the process was slow, it was helped by our relentless focus on taking care of our clients, on doing what's right, and on letting our demonstrated results speak for themselves.

The third big obstacle was obtaining the requisite insurance contracts. Many of these insurance companies have "carved out" specialty pharmacy to one of their preferred pharmacy providers. Breaking into that group as a new pharmacy is not easy and there are still significant barriers to joining and staying in these specialty pharmacy networks. We are helped by North Carolina's Any Willing Provider law and its Pharmacy Choice law, albeit these laws have limits as they relate to PBMs. It remains a fact that a large number of the PBMs and an increasing number of insurance companies have their own specialty pharmacies. That level of competition is often tilted towards these PBMs and insurance companies given the disparate co-pays between providers, their communications advantages, and other dispensing rules. In fact, several of the largest PBMs will not even issue a billing number to a pharmacy like MedPro Rx citing their opinion that these are retail pharmacy PBM agreements only, not specialty. Ironically, in North Carolina, the NC Department of Insurance does not regulate PBMs under their current interpretation of their scope and powers.

An advantage to being self-employed is that you get to control your own destiny while setting your own guidelines for balancing all of life's opportunities and challenges. You get to pick your own team, develop them, and help them achieve their own personal goals within the framework of the company's goals. You get a chance at reaping the rewards for taking the risk to set your own course. Along the way, you can have fun doing what you love to do. You can relate to your clients on a level that you determine is appropriate. Simply stated, you can do what needs to be done.

As far at the risks of being self-employed- it is all you at the end of the day. There is pressure to maintain the right tone at work, to meet the challenge of staying financially strong, to take care of your customers, and to provide a great environment in which your employees can work. While one of your goals is the rewards for taking the risk to set your own course, it could be the opposite. All losses are yours. There are no guarantees.

What advice would you give to others who may want to start a business?

If you want to start your own business, take the time to plan what you intend to do. "Ready, fire, aim" is not a good formula for long-term success. Go through the pains of writing a business plan with realistic projections and with defined cash flow needs. You should plan for contingencies. Things usually will not happen as the business plan described them. Lastly, make sure that you are doing what you are passionate about. If this is going to be your legacy, you need to make sure you are doing what you want to do.

They believed in my ideas

By Calista Chukwu
Owner, Allcare Pharmacy Services

I graduated from UNC Elshelman School of Pharmacy in 2006 and currently own and manage Allcare Pharmacy Services located in Garner, NC. The goal of Allcare Pharmacy Services is to reach the less educated, the disabled and those who have limitations in utilizing the resources available in the community for pharmaceutical care. At Allcare we provide pharmacy services to all patients with emphasis on those with chronic diseases and multiple and complicated medical regimens. Every patient at our pharmacy receives an initial medication review and then subsequent reviews each time their medications are filled, which is usually monthly. We act as liaison between the patients, their physicians and third-party payers, and we deliver medications at no cost to the patients.

My personal experience as a pharmacist manager for one of the chain pharmacies pushed me into making inquiries on what becoming an independent pharmacy owner entails. As a pharmacist manager, all that mattered was the script count and there was no time to communicate with patients. I was filling prescriptions and returning them to stock because patients were not picking them up. After further

investigation, I discovered that patients were not picking up their prescriptions because they did not have transportation to the store, or the timing of their medication filling did not correspond to the time their disability check arrived, or simply because they did not understand what their medications were and why they should be taking them.

Allcare Pharmacy was established in 2009 at the time when the economy went down. This was made possible by the tremendous support given to me by NC Mutual Wholesale Drugs in Durham and the Manager of First Citizens Bank in Angier. They believed in my ideas when I presented them and wanted to give me a chance. Currently, Allcare Pharmacy has a full-time and a part-time pharmacist and two certified technicians.

Our tri-county location allows us to deliver medications to patients in Wake, Johnston, and Harnett Counties. I love my job and any positive impact I make on peoples' lives gives me joy. I spend countless hours in the pharmacy ensuring that patients' medication needs are taken care of as needed. Currently, I don't receive enough financial reward for the time that I spend on the job, but the emotional satisfaction that I get is parallel to nothing. Like many other small businesses in this current economy, my obstacle is inadequate financing. The banks are still reluctant to lend money to small businesses and this limits the pharmacy's ability to reach its full potential.

Even with these obstacles, I feel privileged to be an independent pharmacy owner and manager. I am able to tailor my time around the needs of the pharmacy and the patients. As the manager and service provider, I am able to communicate with patients and listen to their problems first hand. This makes it possible for me to solve their problems as quickly as possible. If I have gained nothing else so far from establishing this pharmacy, I am happy for the chance that I have had to show my patients that someone really cares.

Competing with the "big guys"

By James R. Hall, RPh
President & Owner
VIP Computer Systems, Inc.

VIP Computer Systems, Inc. develops, sells, and supports turn-key software and hardware solutions for independent retail pharmacies. The system is also used in many outpatient hospital, community health center, long-term care, free clinic and health department pharmacies.

The software consists of several fully integrated modules designed to assist pharmacists in managing their practice. These modules include prescription filling, electronic billing, drug interaction checking, fax/internet refill requesting, Surescript prescription receiving, and drug monograph printing. The system includes accounts receivable, perpetual inventory for legend drugs and OTC items, cash register function with scanning, debit/credit / FSA card processing, and electronic signature capture. VIP also provides a separate IVR computer which receives prescription refill calls and automatically enters them into a queue for filling. VIP interfaces with several robotic pill counters. It does all of the above with easy-to-use software, making it suitable for a pharmacy filling 50 scripts/day to the pharmacy filling a volume of 1000 scripts/day.

I finished Pharmacy School at UNC-CH in 1967. During the next eighteen years, I gained valuable experience working in various independent and chain pharmacies as a relief pharmacist. I also worked for eight years in hospital pharmacy at UNC Hospital. Looking for new adventure, I began work for a local firm which developed an on-line pharmacy software package. In 1985, lead programmer Dick Thompson and I started VIP Computer Systems, Inc., developing a solution for pharmacies based on the Unix operating system which made the IBM PC's as powerful as mainframes of the past.

Since then, I've spent many long days developing up-to-date software and installing state-of-the-art hardware. Calls for technical support are common early in the morning and late at night. I once fielded a 3:00 a.m. call from a pharmacist who couldn't sleep and had gone to work to do his Medicaid billing at a time when the Medicaid computer was down. Since it was Thanksgiving morning, his wife was not pleased but individual tech support and service is highly valued by my customers.

After a weekend fire at a client's pharmacy, the hard disk was recovered from charred remains and a new VIP System was delivered with data intact, enabling the pharmacy to open the next day in a temporary location.

Probably one of the biggest hurdles in owning any small business is competition with the "big guys" - large companies with many programmers and salespersons, not to mention advertising budgets. It is quite a rewarding experience to replace a computer system provided by a competing company and find that VIP actually does a better job.

While I readily admit there is much hard work involved with developing the system as well as extreme frustration dealing with ever-changing governmental regulations, building VIP Computer Systems, Inc. has been worth it. It has given me the opportunity to work with new pharmacists, fraternity brothers, and several pharmacists I worked with previously. It is very rewarding when customers call to thank you for helping make their job easier and their pharmacy run efficiently. A true measure of VIP's success is the number of pharmacists who, when opening multiple locations, request new systems for each store. Several users have more than ten stores!

If you are thinking about starting your own business, go for it. Being self-employed means you can set your own hours...from 8:00 a.m. til 7:59 a.m. ❖

Safety Concerns with Barcode Scanning

By Robert Cisneros, PhD
Assistant Professor
Pharmacy Practice Dept., Campbell University
College of Pharmacy & Health Sciences

Improvements in technology have increased many aspects of patient safety in pharmacy practice and healthcare in general. Yet, evidence does exist that new technology can also create the potential for new types of errors. For example, computerized physician order entry (CPOE) has hopefully lessened dispensing errors related to poor physician handwriting, yet human mistakes have occurred with CPOE in the computer selection of the wrong patient, wrong drug, and/or wrong dose.[1-4] What makes these types of mistakes troublesome is that in some instances a pharmacist receiving the transmitted prescription, except for the most obvious errors, may not know that a mistake has even been made- a mistake which could have serious consequences.

The advent of Pyxis and similar automated dispensing machines in hospitals were anticipated to bring about major reductions in medication errors. They indeed have been of great help in reducing certain types of errors. Yet, errors still have occurred. For example, in these types of dispensing machines, human error has led to the replacement of the wrong drug in the wrong drawer which in turn has led to the administration of the wrong drug or dose. Case in point were the many serious errors and infant harm done by mix ups of heparin vials in recent years which received national attention.[5]

Technology errors have occurred not necessarily because of the technology itself but because of the human utilizing the technology. Often times, perhaps because of workload, stress, or just laziness, shortcuts are taken, bypassing key steps and double checks in the use of the technology. There's no way around it, human beings are human beings. We are imperfect.

Bar code scanning practices

While some technology may be unique to hospitals, bar code scanning technology can be found in both the hospital and community pharmacy settings. This technology can ensure that the correct medication is selected to prepare a prescription and, by scanning an ID bracelet for the hospital patient, that the correct patient will receive the correct drug. Sounds simple doesn't it? Yet errors still have occurred.

One contributing factor to many errors are "workarounds," that is, shortcuts taken to bypass standard procedures and policies.[1] Workarounds can occur in any pharmacy environment. Koppel et al have studied barcode scanning issues in hospital settings created by "workarounds."[2] Through interviews and direct observation of nurses, fifteen practices were observed which could lead to errors such as wrong drug, wrong dose, or wrong patient. Examples of practices seen include: scanning a barcode label after it was removed from the medication bottle, scanning one label multiple times rather than actual medication packages, administration of medication without scanning the barcode, no visual check to verify a new medication order before administration, and the disabling of alarms or indicators on the scanning device. The article concluded with a warning: "New workarounds will emerge in response to changes in technology, workflow, and patient types. Evaluation of actual technology use must be ongoing." [p. 421] Workarounds were also identified by Patterson et al[6] as a potential problem with bar code scanning.

In the *Annals of Internal Medicine*, McDonald described a "near miss" related to a bar coding mixup.[7] Two patients were admitted to a hospital at the same time. One of the patients was diabetic. The bar coded wristbands were mixed up and each patient received the other's identification wristband. The diabetic patient's blood sugar was greater than 600 mg/dl and a medical intern was writing an order for sliding scale insulin which would have

- continued next page

Table 1. Pharmacy Student Observations of Problem Barcode Scanning Practices[9]

1. "On a prescription for a liquid, the bottle didn't contain enough for the whole prescription. The bottle was scanned properly and a label generated but the wrong second bottle was selected and used. No scanning was required for the second bottle."
2. "Scanning barcodes which are taped to shelves and not on the box or bottle could be dangerous. Thus the actual bottle or product is not scanned which increases the risk of an error."
3. "What I have seen is when a medication is not picked up by a patient it is returned to stock. A new label with a scannable barcode is supposed to be put on bottle. Sometimes labels can be put on wrong bottle leading to errors or new labels not put on at all. Another stock bottle's barcode is used for scanning but if no check is made to make sure it is same drug, errors can be made. For example, Allopurinol 100 mg. could end up in bottle labeled Atenolol 100 mg."
4. "Some medicines come in packs of 30 tablets, with each pack labeled. But often more than 30 might be ordered, for example 90. A mistake could be made if only one pack is scanned three times rather than each pack scanned separately. The wrong drug could be dispensed."
5. "I have seen a tech bypassing the barcode scan before the stock bottle has even been pulled, just to save time. The pharmacist does a thorough job of verifying the prescription. If verification was not done appropriately and the wrong drug selected, the error could reach the patient."
6. "Some items come individually packaged but are grouped in a larger box (such as fluconazole). The whole box must be scanned for the correct NDC rather than the individual package. If not checked carefully, it's possible for the correct NDC to be scanned but the wrong tablet strength is placed in basket."

been administered to the wrong patient. However, another physician questioned the blood sugar and the error was detected.[7] While most of our patients in community pharmacies don't have scannable ID wristbands, could the wrong patient receive the wrong medication if faulty scanning practices are used? Definitely.

Patterson et al[8] published 15 "Best Practices" for bar code use in the VA System. Though specific for a hospital and the VA System, a few of the practices which could be generalized for pharmacy use include:

- all personnel should be trained in proper use of the equipment
- problems should be reviewed and discussed and not merely "worked around"
- have plans for contingencies such as "downtime" or faulty equipment
- be alert for equipment malfunctions
- verify allergy information.

This writer asked for input from pharmacy students regarding barcode practices which they felt could lead to safety problems.[9] Several examples of student observations are listed in Table [1]. Many are related to troubling practices found in previously mentioned studies. Note some of the shortcuts mentioned: bypassing the barcode scan, using barcodes taped to shelves rather than the barcodes on the actual product, scanning an item multiple times rather than scanning the actual products used in preparing a prescription. ❖

Summary

Technology has made spectacular advances in health care over the last 50 years. Yet, the effectiveness of technology depends a great deal on appropriate use of the technology by humans. Barcode scanning is a technology found in many pharmacy settings. Yet shortcuts and failure to follow appropriate steps can negate the ability of barcode scans to ensure safety and appropriate dispensing of medication. Appropriate procedures must be followed. The temptation to engage in shortcuts is great because of workload and stress but the ultimate question we have to ask ourselves is what is most important: the "need for speed" or the "need for safety?"

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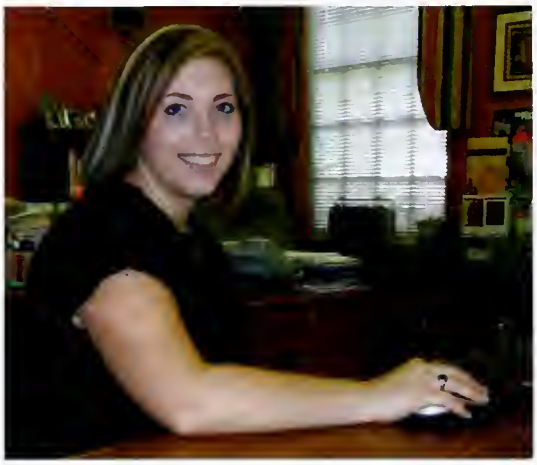
Association Management Residency: *What a Great Start!*

By Morgan Norris, PharmD

In October 2009, during one of my fourth-year rotations at Campbell University, Ryan Swanson, PharmD, approached me inquiring as to whether or not I was planning on doing a residency. A residency? I had just planned on going into community pharmacy and being a pharmacist. He then proceeded to tell me about the residency he had completed at NCAP. As he was telling me about his experience, I knew this was something I wanted to explore. A year and a half later, here I am, cleaning out my desk and reflecting on what has been an amazing experience and one that I never expected. Association management was what this whole residency was about, but what was that? I was in the dark. I was very interested in gaining teaching experience, but other than that I was not sure what to expect.

When it came to understanding how an association operates, I had no idea what went on "behind the scenes." Whether it is the day-to-day office activities, from checking email to keying in the membership and CE, to website maintenance, or organizing meetings, I was completely unaware of all that happens. Thankfully I had the opportunity to work with the amazing NCAP staff who not only taught me how a professional association operates, but also many valuable life lessons along the way. Linda keeps the place running and organized without a glitch. As one of the first people you talk to and see at NCAP, she brings a personal touch to the association. Teressa, the CE and membership coordinator, keeps all the information about every member, manages CE, and about a million other things, seamlessly. Sandie, NCAP's meeting and events planner, puts on a fabulous event and makes it look easy. Sally, the website and journal guru among other things, maintains the public "faces" of NCAP and keeps all the members "in the know" with the e-news. Running an association is hard work but with a staff as hard working as the NCAP staff, it works like a well-oiled machine.

Teaching experience was something that I gained working as a lab TA at the Eshelman School of Pharmacy at Chapel Hill during the fall semester. Through that experience, I was able to work on my time management skills and communication skills. While I feel I learned a great deal from that experience, I also know that I still have a long way to go be an effective educator. Public speaking is not a forte of mine and that is something else I worked on throughout the year, not so much as a TA but as a representative for NCAP. Whether welcoming pharmacists to North Carolina at the Board of Pharmacy reciprocity meetings or talking to students at schools of pharmacy, I was able to work on public speaking. Although education is an interest of mine, I need to become more comfortable speaking publicly and I know as I grow as a professional that will improve, with practice.



NCAP's most recent resident, Morgan Norris, PharmD.

Travel was another big part of my year at NCAP. I attended several national and regional meetings throughout the year and met and worked alongside many pharmacy leaders. Whether I was attending a BOP meeting or talking about pharmacy issues in other states at a NASPA meeting, I was incredibly blessed this past year to be able to work with and learn from the "movers and shakers" in pharmacy. One of which was my preceptor and office-mate, Fred Eckel, who not only taught me about running an association, but also helped me see beyond the community pharmacy practice of which I was accustomed. Fred is a leader to whom I look up to both professionally and personally. His faith in God and passion for his profession are something to be admired and respected. I hope that throughout my pharmacy career I will continue to grow and become a semblance of the leader he is. If I do, I will consider my career and life a success.

Legislation, both on the national and state levels, was a great experience and a huge part of my residency. NCAP lobbied in the NC Legislature this past session for expanded immunization by pharmacists. I was able to learn firsthand how things are done in the Legislature and this was eye-opening to say the least. I was able to attend both RxImpact and the NCPA legislative conference in Washington, DC to meet with legislators and lobby about issues such as Medication Therapy Management, Tricare, and PBM transparency.

Meeting planning was something else I was able to do this past year. I planned different programs throughout the year and worked closely with Sandie and Linda to make them successful. The membership development competition was one of the first programs I had to plan and while I was not able to attend the meeting, I worked closely with Fred and all the NCAP staff to make sure it ran as smooth as possible. MTM programs in Myrtle Beach, Durham, and Greensboro, OTC Jeopardy at the annual convention, Immunization training for pharmacists at the association, and the Health Fair for Pharmacy Day in the Legislature were other programs I was in charge of this past year.

NCAP has been an amazing experience to say the least. From working with leaders in pharmacy, meeting planning, teaching experience, and learning the ins and outs of association management, I have grown both personally and professionally. Although my pharmacy career is only in the infant stages, passion for a profession I love, advocacy, involvement, leadership, and professionalism are only a few of the things that were taught to me in this past year. And if the old saying is true, that children learn the most in the first two years of life, then I would say my pharmacy career is off to a pretty great start. ❖

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Clinical Specialist, Infectious Diseases
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Law and policy, on both a federal and state level, have a major impact on the profession of pharmacy. Legislators create laws which drive the development of regulations and policies that affect the day-to-day practice of pharmacy, including reimbursement, workforce availability, medication safety, and access to care. It is imperative that pharmacists take an active role in the development of new legislation, in addition to advocating for policy changes. To be most effective, this advocacy must take place on a local, state, and national level. Patients deserve to benefit from the knowledge and medication expertise that pharmacists provide. Demonstrating the value of our profession through political action enables pharmacists to continually expand the use of their extensive clinical knowledge for the care of patients. With healthcare reform as a top priority of the current federal administration, it is imperative that pharmacists are involved in the change. As pharmacists, we are the best advocates for our profession to ensure that we remain recognized as the medication experts within a changing healthcare model.

As new practitioners we have the opportunity to shape the profession in which we will practice. The opinions of new practitioners must be heard amidst all advocacy efforts because the changes, both position and negative, will have the greatest impact on our professional future. Without the support of pharmacists and technicians, legislation that advances the profession would not be possible.

Often the biggest hurdle to becoming involved in advocacy is not what to say, but rather, how to communicate effectively and gain access to a legislator. Before launching into any new endeavor, it is best to become familiar with the process. NCAP hosts Pharmacy Day in the Legislature which will sharpen your advocacy skills and allow for time to interact with key legislative leaders. As key legislation approaches decision points, members will be called upon to contact their representatives for support. This call to action is not only used by NCAP but also national pharmacy organizations such as the American Society of Health-System Pharmacists (ASHP) and the American Pharmacists Association (APhA). Pharmacists should provide legislators with detailed examples of how the legislation will impact their practice setting. These first-hand stories of pharmacy practice can have a very meaningful impact on the outcome of the bill.

Advocacy extends beyond the work of Congress or state government. Each day, we must continue to advocate for our presence within the future healthcare delivery model. These advocacy efforts should incorporate patients, physicians, other healthcare professionals and organizational leaders. Within our individual practice sites we should take every opportunity to promote ourselves and showcase our vital role in the care of patients.

For those with a greater interest in advocacy, especially policy development, NCAP has a volunteer group which helps guide the priorities of the organization. Both APhA and ASHP have policy development groups who focus on organizational policy as well as federal advocacy.

Now that you know why and how to get involved, there are many resources available to assist you in taking action.

NPN Member Spotlight: Jamie Brown

Many aspects of the health care system are changing rapidly, perhaps none as much as the profession of pharmacy. With such a dynamic environment, it is more important than ever that pharmacists become leaders in order to move pharmacy in a positive direction. It is this line of thought that should drive our profession and motivate each new practitioner to not only expand his or her own professional boundaries, but also to expand the role of the pharmacist in today's healthcare environment.

To embrace this inherent directive, I knew that there would be a need for advanced training after graduation to open the doors for these opportunities. Therefore, after graduating from Campbell University's College of Pharmacy and Health Sciences, I completed a post-graduate specialty residency in Drug Information with Campbell University. Although there were many opportunities in Drug Information across the country, I accepted a position with the Durham VA Medical Center in order to practice in one of the most progressive health-systems in the country in terms of pharmacy practice, to work with a patient population that is traditionally underserved, and to surround myself with colleagues and organizations such as NCAP that truly are moving the profession forward. I have been working at the Durham VA for approximately four years now and currently serve as the PGY1 Residency Program Director, Director of the Medical Center's Drug Information Center, and Coordinator of the Investigational Drug Service. But I also think it is important to be involved in our profession outside of our normal practice, whether it is giving back to the profession through teaching and precepting, or by becoming a leader in local, state, or national organizations. This has led me to be involved in a number of organizations, including serving as the Committee Chair of the NCAP Residency Committee and becoming a member of the national VA Disaster Emergency Medical response group, as well as incorporating teaching into my practice by precepting both PGY1 and PGY2 residents in Drug Information and serving as a guest lecturer and student preceptor with Campbell University.

We as pharmacists are very lucky to have the opportunity to practice the profession of pharmacy in the state of North Carolina, a state that supports the expanded role of the pharmacist through activities such as collaborative practices and pharmacist-delivered immunizations and with organizations such as NCAP that continually strive to promote our profession. I look forward to seeing the continued growth of pharmacy and hope that I can be one of the many driving forces behind it.

The first step is familiarizing yourself with the pieces of legislation that impact you. Visit the North Carolina General Assembly website to search and access bills related to pharmacy practice. Also, use this site to find, and contact, your local legislators. Another great way to access current legislation is by visiting the ASHP Grassroots Action Center. From this site you can view "hot" topics, search for specific bills, and send your opinions via form letters and action templates. Once you understand those items that most impact your practice, visit the variety of resources offered by professional associations:

North Carolina General Assembly:
http://www.ncga.state.nc.us/

ASHP Grassroots Action Center:
http://app6.vocusgr.com/WebPublish/controller.aspx?SiteName=ASHP&Definition=Home&XSL=Home&SV_Section=Home

ASHP Introduction to Advocacy for New Practitioners and Advocacy Toolkit:
http://www.ashp.org/Import/MEMBERCENTER/NewPractitionersForum/DevelopmentalResources/Introduction-to-Advocacy-for-New-Practitioners.aspx

APhA Government Affairs Site:
http://www.pharmacist.com/AM/Template.cfm?Section=Government_Affairs&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=94&ContentID=11444

NCAP Take Your Legislator to Work:
http://ncpharmacists.org/displaycommon.cfm?an=1&subarticlenbr=149

And this is just the beginning. Explore these, and other, professional organizations to begin understanding the issues that matter most to your specific practice. More than any time in recent history, health care is changing at a rapid pace. Landmark changes, including the passage of the Patient Protection and Affordable Care Act, the advent of Accountable Care Organizations, and the growth of the Medical Home Model, all offer unique opportunities for pharmacists to maximize our value for the benefit of our patients. We must seize these opportunities to impact change, ensuring we control the future of our profession. It is an exciting time to be a new practitioner. We encourage you to use NCAP, the New Practitioner Network, and the resources listed above to join us in advocating for the benefit of our profession and the patients we serve. ❖

Online Offerings: Pharmacist Refresher Course & QA/Law

NCAP has partnered with the Connecticut Pharmacy Association to offer The Pharmacist Refresher Course, an online course designed for pharmacists who wish to return to community pharmacy practice after an absence from practice for three or more years. The course consists of three modules, all of which have been approved for ACPE credits. The first two modules are online and composed of weekly study segments that allow course participants to work at their own pace, on their own time. The third module consists of a three-week, 90-hour live experience in a community pharmacy. Only those who participate in all three modules will earn a Pharmacist Refresher Course Certificate from Charter Oak State College. Those taking modules One and/or Two for personal enrichment will earn ACPE credits through CPA. This course will give home study law credit to any pharmacist wanting to learn about quality assurance strategies and North Carolina's pharmacy laws.The QA/Law Course can be used to prepare for reciprocity into North Carolina, or for those who want an update on Pharmacy Law and Quality Assurance. Students must follow a two-week course schedule. Online discussion boards and instructor monitoring and interaction keep you on track throughout the course. The course is offered the first two full weeks of every month. This course is accredited by ACPE for 15 hours of home study law education. For more information visit www.ncpharmacists.org.

calendar

September 24:
Student Leadership Conference, Pinehurst, NC

October 23-25:
Annual Convention, Greensboro

More information at www.ncpharmacists.org

Pharmacy Time Capsules

1986 - Twenty-five years ago:
72 accredited US colleges of pharmacy graduated 10,685 students with entry level professional degrees (9,501 BS and 1184 PharmD).

1961 - Fifty years ago:
75 accredited US colleges of pharmacy graduated 3,497 students with entry level professional degrees (3,395 BS and 102 PharmD).

1936 - Seventy-five years ago:
Pentothal (thiopental sodium) is introduced by Abbott Laboratories. Ernest Volwiler, one of the inventors, went on to become president of Abbott. The American Association of Colleges of Pharmacy's premier research award is given annually in his name.

Hospital Pharmacists of Minnesota (HPM) formed with the objective of extending and promoting hospital pharmacy.

1911 - One hundred years ago:
Pharmacy education resumed its operation as The University of Tennessee School of Pharmacy, upon the transfer of the UT medical and dental schools to Memphis.

1886 - One hundred twenty-five years ago:
John Pemberton, an Atlanta pharmacist, concocted a flavorful syrup which was added to carbonated water at Jacobs Pharmacy and Coka-Cola was born.

By Dennis B. Worthen, Lloyd Scholar, Lloyd Library and Museum, Cincinnati, OH
One of a series contributed by the American Institute of the History of Pharmacy, a unique non-profit society dedicated to assuring that the contributions of your profession endure as a part of America's history. Membership offers the satisfaction of helping continue this work on behalf of pharmacy, and brings five or more historical publications to your door each year. To learn more, check out: www.aihp.org

Fred M. Eckel Pharmacy Leadership Award Established

The UNC Eshelman School of Pharmacy and UNC Hospitals have established the Fred M. Eckel Pharmacy Leadership Award in honor of the School professor who established the UNC Hospital Pharmacy Residency Program 44 years ago.

Eckel, a faculty member in the Division of Pharmacy Practice and Experiential Education, joined the School in 1966 and established the pharmacy residency program at UNC Hospital the following year. Since its establishment, the program has trained more than 250 residents, who have been practicing pharmacy around the world in settings such as acute care, ambulatory care, academia, and administration.

Eckel graduated from the Philadelphia College of Pharmacy in 1961 and completed his MS in Hospital Pharmacy and residency at The Ohio State University in 1963. He has spoken on pharmacy topics in all fifty states and on five continents. He has held numerous offices in pharmacy organizations at the state and national level. He currently serves as editor-in-chief of *Pharmacy Times*, executive director of the North Carolina Association of Pharmacists, and executive director of Christian Pharmacists Fellowship International.

UNC Hospitals and the UNC Eshelman School of Pharmacy honored professor Fred Eckel, MS, on June 28 at the George Watts Hill Alumni Center during a reception to recognize the 2011 class of pharmacy residents for completing their residencies. The award was presented to Eckel (left) by Rowell Daniels, Director of Pharmacy Services at UNC Hospitals.

Pharmacists Say it Best ...

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—Jeanie Barkett, RPh, Long Term Care Pharmacy Lead Pharmacist, Providence Specialty Pharmacy Services, Portland, OR

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Support your pharmacy, patients, and colleagues by encouraging your pharmacy technicians to become PTCB certified.

PTCB
Pharmacy Technician Certification Board

NCAP's Technician Review Seminar will help you prepare for the PTCB Exam. Check www.ncpharmacists.org for Seminar dates and locations.

CONNECT ONLINE: